RECIPROCAL MEAT CONFERENCE

75TH ANNIVERSARY

1948 - 2022



AMERICAN MEAT SCIENCE ASSOCIATION

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75th Anniversary

Section I - Meat Science Overview

Without the vision and leadership of Thomas Wilson and Roscoe C. Pollock, meat science would not be where it is today. Their dedicated vision and determined leadership were the driving forces for the formation of The National Live Stock and Meat Board (1922), the formation of the American Meat Institute Foundation Research Laboratories in Chicago (1924), creation of the Cooperation Meat Investigations (1924) via The National Live Stock and Meat Board, the beginning of intercollegiate meats judging (1926), the first RMC (1948), the Meat Industry Research Conferences (1948), the American Meat Science Association (1964), and ICoMST-name change (1987). Meat science as we know it today traces to key events and key leaders in the 1920's to the present day.

Meats in the classroom began with Andrew Boss at the University Minnesota in 1893 followed by the first meat laboratory in 1900. The University of Illinois offered a meats course in 1902, Michigan State in 1907, Penn State in 1912, Ohio State in 1913, Cornell in 1915, Kansas State, Kentucky, Iowa State and Colorado State in 1919. These programs represented the beginnings of Meat Science and were quickly followed by at least ten additional universities. Today we have well over 150 four-year meats programs in the U.S. and numerous meats programs at two-year institutions (See Appendix L).

Quoting Bob Bray (University of Wisconsin) "meats men became meats scientists in the 1950's through the 1960's" (Reciprocal Meat Conference 50th Anniversary, 1997, p. 5) (See Appendix M for the full excerpt of Dr. Bray's Historical Account). In the 1940's there were fewer than six "meat" scientists with PhD's in the US. In the 50's and 60's a dramatic increase in the basic sciences were applied to meat science. The meat science focus continued with emphasis on meat grading, meat composition, meat quality, and role of meat in the diet. Many third and fourth generation meat scientists were called "muscle biologists". The focus in microbiology research in the meats arena began to see some significant expansion in the 70's and 80's. Up to this time, little if any, education regarding HACCP was in the classroom. With the *E. coli* O157:H7 outbreak in 1992-93, HACCP entered the classroom and the focus on food safety exploded. The Jack in the Box outbreak of 1992-93 resulted in the largest change in meat inspection regulations in history and impacted food safety worldwide (mandatory HACCP and declaring *E. coli* O157:H7 as an adulterant).

The immense amount of research over the past 90+ years has generated a tremendous amount of knowledge. Just think of where we are today regarding our knowledge of what makes meat tender or tough, what impacts flavor, shelf-life, color-life, consumer desires, packaging, the role of meat in the diet, and the genetics of producing the highest quality, safest products in the world. We should be proud of our accomplishments in meat research and equally proud of the highly trained students that are now leading or will be leaders in the future.

Significant changes that have impacted the meat industry (beginning in the 60's):

- Vacuum packaging/boxed beef-IBP and Monfort (60's)
- Major shift from railways to truck deliveries (60's)
- Shift from multi-species full line slaughter/processing plants to single species plants and separate single or multi product processing facilities (60's)
- Shift toward more university research, teaching, and extension programs related to meat processing as opposed to just fresh meat (60's)
- First Department to contain the name Meat & Animal Science (Wisc., 70's)
- New breed of independent packers emerges. Feedlots move to areas of grain production and packing plants followed led by Monfort, Cargill and National Beef (70's)
- Export markets discovered (70's)
- Retailers move towards centralized consumer packaging, either at a separate facility or by the meat packer and away from in-store meat cutting (70's)
- Chicken enters fast food arena and case ready retail (70's)
- Congress begins Dietary Guidelines and goes negative on meat (80's)
- Greater understanding of growth and composition (70's & 80's)
- Vacuum packaging becomes commonplace (80's)
- Shift to ¼ in. fat trim at retail (80's)
- Poultry becomes #1 animal protein (90's)
- Key mergers and acquisitions (past two decades)
    - Tyson acquires IBP and Hillshire Brands
    - JBS buys Swift and the Smithfield Beef Group
    - AgriBeef purchases Washington Beef
    - WH Group buys Smithfield Pork
    - Creekstone Farms buys Future Beef Operations
    - Cargill buys Beef Packers in Fresno
    - JBS buys Cargill Pork
    - National Beef buys Brawley Beef and Iowa Premium
    - Marfrig purchases 50% of National Beef
    - Central Valley Beef buys Harris Ranch Beef
- Past 2 decades
    - Increased focus on animal welfare
    - Implementation of beef instrument grading
    - Increased negative focus of role of meat in the diet and climate change through social media, etc.
    - USDA's increased focus on *Salmonella*
    - Growth of plant based and cultured, non-meat imitations of traditional meat products.
    - Addition of Meat and Muscle Biology Science Journal within AMSA.

Special issues that have been impactful to meat science research include:

- The loss of The National Live Stock and Meat Board
- The loss of the tremendous scientific workforce in the American Meat Institute Foundation Research Laboratories in Chicago.
- The loss of the Meat Industry Research Conference.
- A growing decline of PhDs taking the academic route and the declining numbers of meats faculty in academia.
- Low industry investment in basic meat sciences in universities.

Section II - A New Era is Dawning

A. AMSA Comes of Age (See Appendices A – D)

In 1995, The National Live Stock and Meat Board dissolved, and AMSA was faced with many decisions including where to relocate, determining if other entities would be a good partnership, or if AMSA needed to stand on its own. The decision was made in 1997 to move to Kansas City with Martin Fromm and Associates, working as the management company for AMSA. Kansas City provided the unique opportunity to relocate to a more centralized location, establish a clean break from the Meat Board and NCBA, and stand on its own as an independent organization. During the time in Kansas City, leadership contemplated how the organization functioned and how to finance the fledgling organization and realized that RMC had to transition from a project to a product. RMC became established as a crucial component to underwrite many other programs AMSA provided.

Moreover, before the Meat Board dissolved, the AMSA Board's primary role had always been planning RMC and played a minimal role in the actual operation of the organization. The Board of Directors decided this needed to change and the leadership structure underwent crucial changes to set up the future of AMSA. One of those changes required membership to become more involved in numerous committees to help further the vision of AMSA.

In 1997, Thomas Powell joined AMSA as the Executive Director and held this position until 2018. In 1999, it was determined that AMSA would move to Champaign, IL. Initially, AMSA chose to work with the Federation of Animal Science Societies (FASS) management group, but as the AMSA staff grew, AMSA decided to operate independently of a management group for the first time.

During the early 2000's, AMSA was focused on financial solvency and a plan to stability, while increasing focus on diversity of membership with students and industry participation. The Sustaining Partner platform was introduced in the mid 2000's. The concept of tiers of support with memberships and other benefits was conceived and has been beneficial to AMSA. By the 2010's, AMSA had restructured and increased the size of the Board of Directors, updated Bylaws, substantially increased international presence, and focused on increasing the size of the endowment. We concluded the development of a formalized AMSA Operating Manual for the organization that

documented key business processes, governance structures, and standard operating procedures. In 2011, AMSA held the first International AMSA Board meeting at Maple Leaf's headquarters in Canada.

By 2015, AMSA was challenged to tackle several controversial topics. It defined the term "meat" which provided a basis for lending our expertise in the field of 'cultured' meat. Also, AMSA leadership had challenging discussions around the then official journal "Meat Science" and its future. In a bold decision, ties were cut with Elsevier and we moved forward with our very own journal "Meat and Muscle Biology."

AMSA added a permanent meat judging coordinator, Rachel Strobe, later Rachel Hamilton, for that position in 2000. Jimmy Wise replaced Rachel as the meat judging coordinator in fall 2005 through spring 2013. Meagan Igo Haymes then became the coordinator in 2013. Rachel Adams filled the position in 2015 through 2021. In 2022 the position changed to the Director of Youth Programs and Leslie Frenzel was hired and currently holds the position. AMSA continued to add other permanent positions including Deidrea Mabry, who started in 2007, as a Program Director and is currently Chief Operating Officer (COO), Nancy Hayes served as Membership Manager from 2012-2014, Jen Persons served as Membership Manager from 2014-2018, Morgan Pfeiffer served as the Marketing and Membership Manager from 2019-2020, Crystal Ahrens in 2021 as Director of Outreach and Education, and Marianna Behrends in 2022 as Program Coordinator (part-time). AMSA shared offices with the American Society of Animal Science, until ultimately the decision was made to have AMSA staff work remotely.

AMSA began an intern program that targeted exemplary undergraduate and graduate students to help plan and coordinate RMC events, manage website formatting, and helping AMSA staff with projects as needed. The intern program began in 2014 with Morgan Pfeiffer and Drew Cashman, 2015 was Chandler Steele and Jessica Lancaster, Brianna Swartzfager, and Mary Kline, 2016 was DeShea Hanagan and Hallie Hutto, 2017 was Connor Guyton, Michelle Helm, and Katie Frederichs, 2018 was Emma Shelton and Jera Pipkin, 2019 included Samantha Barker, Elizabeth Neal, and Lilly Hildebrand, 2020 was Kylie Philipps and Kaylee Farmer, 2021 was Marcie Cook and Makynna Miller, 2022 is Kielee Whitewood and Morgan Henson.

In 2019, Collette Kaster came on staff as Chief Executive Officer. Since she was already based in Kearney, MO, this became the new home for AMSA. Kearney, with its close proximity to Kansas City, provided a central location for the organization, convenient for travel and near the home of many members, allied industry organizations, and several major universities. All AMSA staff now have the option of working from any remote location in the U.S. with proximity to an airport. This model has served the organization well as it provides a unique benefit to employees and often situates them in broader locales for interaction with members and Sustaining Partners. AMSA continues to invest in infrastructure, but it is of a technical nature rather than brick and mortar. Through a robust database system, website, learning management system and network, AMSA is set to succeed in the future.

B. Birth of the Student Board (See Appendices F & H)

Prior to the creation of the AMSA Student Board, students would participate in AMSA and RMC at dedicated student activities. As more students were becoming involved and participating in the AMSA events, conversations began about how to harness this energy and increase what AMSA had to offer students.

In 2001, Gretchen Mafi was the chair of the Membership Committee with Dave McKenna and Mandy Carr-Johnson. Dan Hale was the member liaison. They were tasked with increasing student membership, and their idea was to welcome undergraduate students. At that time, only students in graduate programs were members of AMSA and attended the annual RMC conference. The only involvement of undergraduates was the few selected for the Undergraduate Travel Award. The committee's long-term vision was to start membership early to increase the likelihood of students continuing on as professional members after graduation. The following year, in 2002, the AMSA approved undergraduate membership and efforts began to recruit students to join AMSA. With the increase in student members and interest, the first Student Board was created in 2002 at the Michigan State RMC. Student Board members were elected by their peers and the first directors included Janeal Yancey, Justin Ransom, Terry Houser, Jason Behrends, Ann Brackenridge, Christine Quinlan, and Jennifer Leheska (who was the first Student Board President).

The newly created Student Board had representatives from 4 regions (South, East, West and Midwest), a President, and two at-large officers. The following year it was noted that the President would roll into a Past President roll increasing the Student Board officers to eight and this has been maintained since inception. Since the introduction of the Student Board, there has been increased student membership, learning experiences, and leadership opportunities for students, both domestically and internationally.

In 2007, the Student Board saw the growth and expansion of the student membership within AMSA and created a new Advisory position for professional AMSA members to engage and assist the growing efforts. Jennifer Leheska was the first Advisor for the Student Board of Directors. The advisor started off as a one-person role but grew into a two-person role to integrate academia and industry.

C. Expansion of AMSA Student Programs

AMSA and the American Meat Institute co-sponsored a program for meat science students called the Intercollegiate Processed Meat Product Clinic, or IPMPC for short. In years past, it occurred in conjunction with the Meat Industry Research Conference (MIRC) and the AMI convention when held concurrently in Chicago. The clinic typically consisted of talks from industry representatives and tours of meat processing plants in the Chicago area. In 2005, there were some hurdles in conducting this program in Chicago, so it was moved on a trial basis to the Milwaukee area, where there are a

good variety of meat processing operations to visit. The clinic proved to be quite a successful experience. In total, about 45 students and advisors from eight universities participated that year. The last MIRC was hosted in 2009 and AMSA currently has plans to rejuvenate the MIRC and bring this great experience and educational opportunity back to our students and young professionals.

The Student Board recognized the need for some additional income to help facilitate the activities to engage and interact with students. To help fund the additional student activities, Student Board Members, Christine Quinlan and Ann Brackenridge, sold mulligans during the annual RMC golf tournament in 2002.

In the inaugural year of competition, (2002), between 15-20 Quiz Bowl teams competed. Currently, the number of competitive quiz bowl teams has doubled. There is also an undergrad scholastic achievement award, which helped bring more undergraduates to RMC, and targeted seniors going to graduate school. The first recipient was awarded in 1977, currently 5 per year are awarded.

In 2003, the Student Board held a silent auction and coordinated the first RMC career fair to create an opportunity for student members to interact with companies and learn about job and internship opportunities. The career fair today is still a great opportunity to network with industry professionals as well as learn about graduate programs from academics. Additionally, in 2004 a processed meats workshop was offered at the University of Kentucky RMC, which eventually became known as the Taste of RMC. Conference attendees got to partake in the Taste of RMC exhibits during the Sunday welcome reception or the Monday family picnic depending on the venue. Iron Chef was another student activity created to enhance the learning and creative thinking of the students in attendance at RMC. In 2007, Taste of RMC and Iron Chef evolved into separate events. A t-shirt auction was organized in 2008 as a way for students and alumni to participate in raising funds for their favorite University t-shirt. Early on proceeds from the auction went towards the Student Leadership Conference (SLC) but more recently proceeds have been contributed to support AMSA Mentorships.

AMSA currently has 868 student members representing 79 universities and colleges in 23 countries. As we continue to grow our student membership, we continue to create new and different ways for students to engage and interact not only at RMC but throughout the year. In 2022, the Student Board created a Photography Contest and began requesting recipes for an AMSA Cookbook to be shared with the members.

Youth activities are supported by AMSA Sustaining Partners, Sponsors and AMSA Development Council Mentorships including those honoring Craig Bacon, Joe Cordray, Michael Dikeman, John Forrest, F. C. Parrish, Chris Raines, and Joseph Sebranek.

D. Sustaining Partners Platform Birth (See Appendices J & K)

The AMSA Sustaining Partner program has allowed companies and institutions to become more involved in helping fulfill the association’s mission. AMSA created the

Sustaining Partnership program to enable companies and institutions to directly partner with the association in pursuit of our common goal to foster the principles of meat science and technology. Since 1995, the Sustaining Partners have supported and enhanced AMSA programs such as student development, scientific information, outreach, and building the global network of meat science professionals.

In 2007, the AMSA Board of Directors expanded the benefits of the Sustaining Partnership program allowing a wider audience to tap into AMSA membership and benefits. Through the support of sustaining partners, key programs, like RMC, meat judging, and white papers are strongly supported. Sustaining partners are also key participants in the association's career development programs such as the RMC career fair, STEP, Student Leadership Conference, and the student board of directors. Partners select a support level: Diamond ($75K), Platinum ($40K), Gold ($20K), Silver ($10K), and Bronze ($5K), and may also choose to support specific programs.

The AMSA Supplier Coalition is a new category of membership that was created in 2022, that connects outstanding students and professionals in meat science to a broad array of key suppliers in the industry. The Supplier Coalition was created to better introduce the many valued suppliers of ingredients, packaging, equipment, and services to our members, and especially our students as they explore career opportunities. The membership allows industry members an avenue to interact with their customers, potential employees, and technical experts in the world of meat science while at RMC.

The relationship between AMSA, its Sustaining Partners, and members has increased the breadth of knowledge and support for the meat industry, universities and students, scientific leadership, and professional development in a very impactful way.

E. History of the Development Council (See Appendix E)

During the 1992 RMC at Colorado State University, AMSA President, Roger Mandigo, delivered a presentation titled “AMSA in the Year 2000” in which he attempted to project what AMSA might look like at the turn of the century. At that time, 53% of the AMSA annual income of $169,200 was funded by The National Live Stock and Meat Board. Cash reserves were $25,000. Dr. Mandigo proposed that AMSA assume greater financial responsibility for the conduct of basic operations from funding secured through industry partnership programs and expansion of AMSA-sponsored science, technology, and education programs. Additional components contributing to the budget would include gifts to the fledgling Endowment Program. No one could have predicted that the dissolution of the NLMB just 3 years later would result in such significant changes to AMSA management and committee structure.

In June of 1999, the AMSA Board of Directors charged the Endowment Committee with the task of investigating and developing a foundation concept. The following year the AMSA Board approved the Endowment Committee’s recommendation to form a Foundation. During the 2001 Reciprocal Meat Conference in Indianapolis, a motion was passed at the Business Meeting establishing the AMSA Foundation. The Foundation

was entrusted with the mission of generating and allocating resources to support and enhance educational programs and the acquisition and dissemination of scientific knowledge in meat science. AMSA President Ann Hollingsworth appointed a Foundation Planning Committee, chaired by Don Beermann with members including R.B. Sleeth, Curtis Kastner, Joe Harris, David Meisinger, and Thomas Powell. The Committee outlined a plan for governance that included a Board of Trustees to administer the Foundation and the creation of a strategic plan. The AMSA Foundation was formally renamed the AMSA Educational Foundation and began life with total assets of about $171,000.

In the fall of 2006, the AMSA Educational Foundation Board of Trustees presented a Mentor Recognition Program to the AMSA Board for approval. The Board approved the program late that same year and initiated the first two Mentorship Funds in the name of R.W. Bray and R.C. Pollock. Mentor Recognition Awards have been successful in growing the Foundation endowment by providing a mechanism to honor mentors and professional colleagues.

In 2019, AMSA restructured the Educational Foundation to include three primary program areas, including the unrestricted Innovation Fund, the Youth Programs Endowment Fund, and the Program, Communication, and Outreach Fund. During this restructuring, the Foundation Board was reestablished as the AMSA Development Council.

To date, there are 32 established Mentor Recognition Funds, three additional Mentor Funds in process, and two Legacy Recognition Funds. These designated endowed funds are the source for many scholarships and awards. In addition, the establishment of the Century Club fund provides unrestricted educational funds to support communication and outreach. From humble beginnings, the AMSA Development Council Fund has grown to nearly $2.5 million dollars.

F. Mentorships/Student Scholarships and Program Support

Support from several of the AMSA Mentor Recognition Funds led to the creation of AMSA Scholarships to support and encourage graduate and undergraduate education and research in animal, food, and allied industries. These scholarships support the efforts of AMSA meat science undergraduate or graduate students in conducting, communicating, and presenting their research at the RMC, other research-based conference, or international meetings like ICoMST.

Kinsman International

The objective of this scholarship is to honor the memory and achievements of Dr. Kinsman and promote international collaboration by recognizing an outstanding student member with a financial award in support of international travel.

- 2014 Michael Chao, University of Nebraska and Megan Webb, Colorado State University
- 2015 Emily Arkfield, University of Illinois
- 2016 Benjamin Bohrer, University of Illinois
- 2017 Amanda Outhouse, Iowa State University
- 2018 Maggie Weinroth, Colorado State University
- 2019 Elizabeth Zuber, Iowa State University
- 2020 Jessica Brown, University of Florida
- 2021 Amelia Welter, Kansas State University
- 2022 Not Awarded

Robert Cassens PhD Scholar

The overall goal is to advance PhD student research and assist in establishing contacts important to their career.

- 2016 Loni Woolley-Lucherk, Texas Tech University
- 2017 Maggie Weinroth, Colorado State University
- 2018 Devin Gredell, Colorado State University
- 2019 Keely Hanlon, Texas Tech University
- 2020 Matt Schulte, Iowa State University
- 2021 Logan Johnson, Iowa State University
- 2022 Morgan Denzer, Oklahoma State University

C. Boyd Ramsey RMC Scholar

The establishment of the C. Boyd Ramsey Mentor Recognition awards scholarships to help graduate and undergraduate students attend the RMC.

Undergraduate

- 2017 Paige Binger, South Dakota State University; Carl Frame, Iowa State University; Marlee Kelley, University of Florida; and Cole Perkins Texas Tech University
- 2018 Michael Cropp, Iowa State University and Maggie Weinroth, Colorado State University
- 2019 Jacob Manternach, Iowa State University; April Molitor, Texas Tech University; Kylie Philipps, University of Florida; and Hannah Williams, Kansas State University
- 2020 Sarah Bludau, Texas A&M University; Melinda Davis, University of Florida; Makenna Greenwald, University of Wyoming; and Mandy Lawson, Oklahoma State University
- 2021 Grace Jakes, Iowa State University; Kayla Hospodarsky, Iowa State University; Rachel Crowley, Iowa State University; and Gabriella Allen, University of Florida

- 2022 Chloe Calhoun, University of Nebraska-Lincoln, Megan Sorenson, Angelo State University; Hannah Folkerts, Iowa State University, and Madison Romanyk, Purdue University

Graduate

- 2017 Brittany Bullard, Colorado State University and Danika Miller, Iowa State University
- 2018 Morgan Denzer, Iowa State University; Tommy Fletcher, Texas Tech University; Ben Mills, Texas Tech University; and Jacob Tuell, Purdue University
- 2019 Esther Ijiwade, University of Alberta and Elizabeth Zuber, Iowa State University
- 2020 Jessica Brown, University of Florida and Taylor Price, Oklahoma State University
- 2021 Sierra Jepsen, University of Idaho and Jordan Nehls, University of Wisconsin-Madison
- 2022 Morgan Denzer, Oklahoma State University and Muhammad Junaid Nawaz, University of Georgia

The Hunter International Travel

The Hunter International Travel Award is a non-tuition scholarship honoring Dr. Melvin Hunt, to support the efforts of meat science graduate students in communicating their research results at international meetings like ICoMST or other similar researched-based conferences.

- 2018 Haley Davis, Colorado State University
- 2019 Jade Cooper, University of Missouri
- 2020 Derico Setyabrata, Purdue University
- 2021 Amelia Welter, Kansas State University
- 2022 Xinyi Wei, University of Guelph

Robert Rust Award

The Robert Rust Award is a scholarship intended to support the efforts of meat science students who are interested in processed meats.

- 2018 Kylie Philipps, University of Florida
- 2019 John Chandler Sarchet, Texas Tech University
- 2020 Abbey Schiefelbein, Kansas State University
- 2021 Bergin Debruin, Iowa State University
- 2022 Meagan McMurray, Texas Tech University

Dr. Bobby VanStavern Award for Beef Quality Research

This scholarship recognizes an undergraduate or graduate student submitting an abstract detailing relevant research pertinent to beef quality and/or consumer perceptions and demand of high-quality beef.

- 2021 Blake Forarker, Texas Tech University
- 2022 To Be Announced at RMC

Non-AMSA Mentorship Scholarships

Phi Tau Sigma - AMSA Research with Impact Scholarship

The ΦΤΣ – AMSA Research with Impact Scholarship was inspired by the career and contributions of Dr. Anthony W. Kotula to the meat science community. The objective of the award is to emphasize the importance of original research, carefully selected to solve vexing problems of the meat/food industry." The Phi Tau Sigma – AMSA Research with Impact Scholarship shall be given to a student Member or recently graduated Member of the AMSA whose undergraduate or graduate research has had, or is expected to have, a significant Impact – a practical and meaningful application. This Scholarship is provided by Phi Tau Sigma.

- 2021 Derico Setyabrata, Purdue University
- 2022 Jacob Tuell, Purdue University

G. Contribution of Women

At the inception and development of meat science within Animal Science and Food Science departments across the U.S., and on up through the 1960's, meat science was a male dominated discipline. This reflected the demographics of agricultural programs in high school, and undergraduate and graduate enrollment at the university or college level. Additionally, the subsequent workforce in academics, industry, and government were highly male dominated. Women were components of meat science mainly through participation in home economic courses up to this time. Women up to the 1960s mainly participated in meat science as consumers and through consumer related fields of study and job placement.

While a small number of women were involved in AMSA (note that in the picture of the first RMC, there were two women present), women played a minor role in AMSA until the 1970's. As the enrollment of women in agriculture programs across the U.S. at the college and university level increased, women began having a presence in AMSA programs such as meat judging and graduate student activities such as the graduate poster competition, attending RMC, and coaching meat judging teams.

Women began to be involved in the first foundational student activity of AMSA, and demographics started to shift to increased women in leadership roles at both the

professional and student membership level. Upon creation of the AMSA Student Board in 2002, the first student board president was a woman, Jennifer Leheska, and a woman held the president role for the first four years. Since the SBOD inception, out of the 20 student boards that have been elected by student members, 14 had a woman president.

As women became involved in AMSA student activities and graduate programs in meat science across the U.S., women filtered into academic, government, and industry meat science roles. Within academia, women began being hired into traditional research, teaching, and extension positions. As women maintained these positions, they provided mentoring for the careers of young women in undergraduate and graduate programs. In many of the undergraduate programs in 2022, female enrollment exceeds 80%. This shift in demographics has changed the demographics of the hiring pool for the meat industry. The meat industry began hiring females into positions from entry positions in middle management such as plant management, quality control, food safety, and research roles. Additionally, there were women with graduate degrees that were in the pool for leadership positions in upper management. Women began moving into senior leadership positions with time and in major roles in government. In other words, as the population for recruitment changed in dynamics from predominantly male to female, the meat industry began changing the demographics to reflect these changes.

During the 1990's and 2000's membership in AMSA increased and the proportion of women to men changed at both the student and professional level of membership. As demographics have changed to be reflective of the change of demographics at the academic level, it shows that AMSA has been a dynamic organization whose culture has changed and met the demands of a shifting demographic.

The first female AMSA president was Dr. C. Ann Hollingsworth in 2001, followed by Collette Kaster in 2008, and Dr. Rhonda Miller in 2018. When MIRC was still running, Dr. Ann Hollingsworth and Dr. Rhonda Miller were the only female chairs. There have been three women chairs at past conferences of the AMSA RMC. Those include Dr. Betsy Booren in 2014, Dr. Anna Dilger in 2022, and Dr. Mindy Brashears will host in 2023. AMSA now boasts its first female Chief Executive Officer in Collette Kaster, who started the role in 2019. C. Ann Hollingsworth was the first woman to fill the role of Secretary/Treasurer from 2002-2006 and Susan Shivas served in this role from 2018-2021. Jennie Hodgen serves in the role today. The first AMSA female award winner was Reba Staggs in 1976 when she received the Signal Service Award. Dr. Ann Hollingsworth won the Signal Service award in 2007, Collette Kaster in 2013, Dr. Elizabeth Huff-Lonergan in 2014, Dr. Elizabeth Boyle in 2016, Dr. Betsy Booren in 2019, Dr. Rhonda Miller and Wendy Feik Pinkerton in 2020, and in 2021 the female winners included Sharon Beals and Dr. Gretchen Mafi.

AMSA is also currently under the direction of an all-female staff leadership team. Collette Kaster serves as the Chief Executive Officer, Deidrea Mabry is the Chief Operating Officer, Leslie Frenzel fills the Director of Youth Programs, Crystal Ahrens

serves in the role of Director of Outreach and Education, and Marianna Behrends is the Project Coordinator (part-time).

H. Contribution to Industry

Over the past 75 years, the RMC has evolved from an intentionally very small meeting of 'meats men' (Originally published in the 50th Anniversary History of the Reciprocal Meat Conference, Bray, 1997, p. 5) to a meeting with diverse attendees and meat science subjects (and lots of meat "women"). The majority (75%) of professional members are from industry, and student membership has grown as well. This change in RMC attendance supports the synergistic relationship between university researchers and industry personnel working in a broad variety of technical areas. This has led to very direct feedback to meat scientists on topics that would benefit from additional research. In turn, industry researchers rely upon their university counterparts to train the next generation of technical experts in meat science. Further, academia has been able to generate ideas which have led to the issuance of U.S. Patents (See Appendix I).

The demand for technically trained professionals in meat, poultry, petfood, equipment, ingredients, and government has far outstripped the number of positions in academia which have leveled or even decreased at many meat science programs. Meat science is an increasingly broad discipline which benefits from all of the experiences of its members. It is currently a major goal of the association to demonstrate the variety of meat science roles available to students and members.

In 1971 there were 56 professional members and in 2022, professional industry members in AMSA are half of the total membership and have been increasingly active in our organization in the past 25 years. These members turn to AMSA in all aspects of their careers, and thus, support of the meat industry is an important component of AMSA's activities.

Scientific information developed and published by AMSA on a wide variety of topics is available on the website. The materials include white papers, e-books, and guidelines covering standardized methodology for many scientific and technical applications. Additionally, the site is a repository developed by AMSA in conjunction with the North American Meat Institute (NAMI), National Cattlemen's Beef Association, and National Pork Producers for numerous fact sheets addressing many industry and consumer questions. Podcasts, recorded webinar presentations, and Meat MythCrusher videos produced in partnership with NAMI are readily available. These on-demand technical resources cover a broad range of subjects for members working in industry, whether new or tenured in their careers.

The extensive student training and development programs, supplemented through mentorships and scholarships, benefit industry by preparing students for careers in ways beyond what may be offered in university classrooms and labs. Leadership and applied technical skills are developed during participation in a wide range of student activities including meat judging, specialty training courses, SLC, and student board

involvement. RMC activities such as quiz bowl, iron chef, processed meat competitions, and research presentation competitions develop skills essential for career success.

AMSA provides the meat industry a forum for recruiting talent via the website with posting of openings, and the RMC career fair and interview opportunities. Companies benefit by their employees' membership in AMSA where they can continue to develop their abilities and represent their companies by serving on committees and influencing the organization's direction. The partnership between AMSA and industry is invaluable and continues to shape direction and progress of all fields involving meat science.

Section III – Professional Growth

A. 25 Years of RMC Growth (See Appendix G)

The most impactful aspect of the changing look and feel of the RMC in the past 25 years has been the influx of students. Attendance at RMC used to struggle to achieve 300 participants, but now we regularly exceed 900. Much of that change has been due to student participation.

The big changes in student involvement came through the initial Student Activities Committee that focused on increasing student participation in RMC. One of the initial events was the student breakfast that paired professional members with students at Mississippi State in 1990. The development of the Student Board, in 2002, helped to contribute even more activities for the students at RMC. The graduate student poster competition was a reoccurring event since 1980. However, other more recent competitive events such as Quiz Bowl, Taste of RMC, and Iron Chef have resulted in an increase in student attendance and participation at RMC.

The AMSA Development Council and its rapidly growing mentorship program has also increased opportunities for students to participate in RMC. Many Mentor scholarships are available to fund student involvement in RMC or other meat related meetings like the ICoMST, by assisting with meeting and travel expenses or with funding for student programming.

One of the biggest program structure changes occurred when the AMSA Board of Directors changed its focus from planning the RMC to running the organization. The RMC program committee took over the arduous task of planning the actual RMC program. The program today retains many of the activities from 25 years ago – reciprocation, concurrent, and plenary sessions. The original format of the RMC provided for a full discussion of current interest topics by the entire group. Obviously, that format became unwieldy as the group increased numbers and interests became more specialized. Early on it was just "meat", in general, primarily fresh meat with a little emphasis on processed meat and food safety. Now, we see a diversity of interests and greater specialization. This has changed the format to accommodate more diverse concurrent sessions and less general discussions of the entire group.

Although we retained many activities, we were a flexible organization as we adjusted to the wants of the members. At the request of the members, the schedule changed the traditional Tuesday golfing and social activities to the weekend so that we would have a concentrated technical program.

We have responded to advances in technology by having recordings of RMC presentations available to members in lieu of the bound printed copy of the RMC Proceedings. In 2020, we flexed again and conducted the joint RMC and ICoMST as a fully virtual meeting while still maintaining all the great aspects that make RMC a memorable experience. We have embraced technology as we moved from physical posters to electronic form making it easier for presenters to disseminate information, and implementation of a mobile app that stores and houses all the technical and social program information at your fingertips. With the support of the AMSA staff, planning committee, and the membership we can adapt to bring the most innovative and current program to the annual conference.

The financial success of the RMC each year is supported in part by funding provided by the many RMC sponsors that support the programming and specific activities of the conference. The RMC is also supported by the AMSA Program, Communication and Outreach fund, and by Mentor Recognition funds including those honoring Ann Hollingsworth, Dale Huffman, Robert G. Kauffman, Roger Mandigo, Robert Merkel, and William. AMSA is certainly appreciative to the sponsors and Mentors for their assistance in ensuring the RMC to be a successful, productive, and informative event

B. University/Industry RMC co-hosting

During most of the 75-year history, RMCs have been held at a university with their faculty and staff serving as the Host Committee. The Host Committees work with the RMC Chair, the RMC Planning Committee and AMSA Staff to develop schedules of events, venues, tours, and other activities. R.B. Sleeth was the first member from industry to be RMC Chairman in 1968. He was also the first industry member to be elected president. In mid-2000, RMC attendance exploded due to growing student programs and industry member attendance. The Board of Directors and AMSA leadership became concerned about the attendance outstripping the capacity of many universities to host. Both physical meeting space and volunteers to organize and facilitate activities were strained. As a result, an idea was borne to bring industry partners into the mix to co-host with universities and utilize convention centers or other venues to supplement meeting spaces and planning resources. Industry Partners were eager and excited to take on this new opportunity. This collaboration allowed more members to engage as part of the hosting of the ‘RMC Party’ which resulted in bigger, more engaging events for sharing and growing our meat science knowledge and network of colleagues, friends, and family. Industry partners were able to support people resources as well as fundraising efforts which became increasingly important with these larger events. This newfound partnership also resulted in stronger industry/university relationships for groups in close regional proximity and has been an

all-around successful model to continue for years. To date we have had eight RMC's that have been co-hosted.

List of RMC Locations, Chairs and University/Industry Co-Hosts
For complete listing of all RMCs hosted, please see Appendix A

2005 ICoMST Baltimore, MD
S. Campano (Hawkins), RMC Chair
Host – Morse Solomon (USDA)
2009 University of Arkansas
H. K. Johnson, H & K Johnson & Associates, RMC Chair
Co-hosts – Craig Bacon (Tyson Foods) and Jason Apple (University of Arkansas)

2011 Kansas State University
S. M. Lonergan, Iowa State University, RMC Chair
Co-hosts - Scott Eilert and Ann Brackenridge (Cargill) and Michael Dikeman (Kansas State University)

2014 University of Wisconsin
B. L. Booren, American Meat Institute, RMC Chair
Co-hosts – Lauren Sammel (Kraft/Oscar Mayer) and Jim Claus (University of Wisconsin-Madison)

2015 University of Nebraska
T.D. Pringle, University of Georgia, RMC Chair
Co-hosts - Larry Quint (Conagra Brands) and Steve Jones (University of Nebraska-Lincoln)

2018 Kansas City
D. Woerner, Colorado State University, RMC Chair
Co-hosts - Larry Hand (Smithfield); Noah Hall and Derek Schroeder (UltraSource)

2019 Colorado State University
T. Wheeler, USDA-MARC-ARS, RMC Chair
Co-hosts - Marcia Reeves (JBS) & Bob Delmore (Colorado State University)

2022 Iowa State University
A. Dilger, University of Illinois, RMC Chair
Co-Hosts – Matt Wenger (Iowa State University), Casey Frye (Burke Corporation), Clay Eastwood (National Pork Board) and Amanda Houser and Courtney Schwartz (Kemin)

C. International

In 1955, a landmark meeting of 22 meat scientists was held in Hämeenlinna, Finland hosted by F.P. Niinivaara, Finland and Mogens Jul, Denmark. The European Meeting of Meat Research Workers (EMMRW) organization was created. At the 32nd EMMRW meeting, Dr. Eero Puolanne championed alterations of original protocols. The 33rd

meeting (1987) returned to the country of origin with a new name, the International Congress of Meat Science and Technology (ICoMST) and presentations only in English.

ICoMST meetings convene on Sunday, have unique scenic/industrial tours on Wednesday and conclude on Friday. Congresses are usually hosted by a European country every other year. The role and scope and programming of each meeting is coordinated by the host country's organizing committee with council from the Scientific Advisory Committee, and the ICoMST Secretariate. Dr. Puolanne was the Secretariate from 1986 -2017. Dr. Declan Troy of Ireland became ICoMST Secretariate in 2018.

AMSA hosted the EMMRW at Colorado Springs (1980; 300 delegates, 100 non-delegates, 36 countries) and ICoMST meetings in San Antonio (1995; 629 delegates, 146 non-delegates, 50 countries), Baltimore (2005; 406 delegates, 174 non-delegates, 226 students, 44 countries), and AMSA was to co-host the 66th ICoMST in conjunction with the 73rd RMC in Orlando, Florida, but with the COVID-19 pandemic, AMSA had to adjust and hosted the 2020 meeting virtually (2020; 585 delegates, 275 students, 33 countries).

ICoMST 2022, in Kobe, Japan, will be the 68th meeting since the EMMRW was formed in 1955. Undoubtedly the founders would be pleased that their pioneering efforts have significantly impacted the globalization of meat science, international collaboration, and the exchange of scientists and both undergraduate and graduate students. AMSA continues its significant role as a global partner of the international meat science community via the *Meat and Muscle Biology* Journal, numerous technical publications, the International Lectureship Award, and the AMSA Development Council Mentorships that support international research and travel awards. See the full listing of ICoMST meetings below.

ICoMST Meeting Locations – 1991 to present

(Listing of meeting sites from 1955 to 1990 are "History of EMMRW, 1987")

Year	No.	City	Country
1991	37th	Kulmbach	Germany
1992	38th	Clermont Ferrand	France
1993	39th	Calgary	Canada
1994	40th	The Hague	Netherlands
1995	41st	San Antonio, Texas	USA
1996	42nd	Lillehammer	Norway
1997	43rd	Auckland	New Zealand
1998	44th	Barcelona	Spain
1999	45th	Yokohama	Japan

2000	46th	Buenos Aries	Argentina
2001	47th	Krakow	Poland
2002	48th	Rome	Italy
2003	49th	Campinas	Brazil
2004	50th	Helsinki	Finland
2005	51st	Baltimore, Maryland	USA
2006	52nd	Dublin	Ireland
2007	53rd	Beijing	China
2008	54th	Cape Town	South Africa
2009	55th	Copenhagen	Denmark
2010	56th	Jeju	South Korea
2011	57th	Ghent	Belgium
2012	58th	Montreal	Canada
2013	59th	Izmir	Turkey
2014	60th	Punta del Este	Uruguay
2015	61st	Clermont Ferrand	France
2016	62nd	Bangkok	Thailand
2017	63rd	Cork	Ireland
2018	64th	Melbourne	Australia
2019	65th	Potsdam	Germany
2020	66th	Kansas City, Missouri (re-located from Florida due to Covid-19)	USA
2021	67th	Krakow	Poland
2022	68th	Kobe	Japan
2023	69th	Padova	Italy
2024	70th		Brazil
2025	71st		Spain
2026	72nd		South Korea
2027	73rd		New Zealand

D. Birth of *Meat and Muscle Biology*

To better serve its members and the profession, AMSA signed an agreement with Elsevier to make *Meat Science* to be the official AMSA journal starting in 2000. Historically *Meat Science* did not publish papers related to poultry and aquatic species and its publication of papers in processing and sensory aspects was limited. By 2015, it was apparent AMSA members needed a publishing outlet for the wide variety of work in scientific disciplines (both papers and RMC abstracts) represented by its membership. The agreement with Elsevier ended with the December 2015 volume of *Meat Science*. The AMSA Board of Directors believed that there was value in the Association having a journal that aligned with the continuously evolving scientific disciplines and multiple species represented by the membership and formed a Journal Committee chaired by Wes Schilling in October 2015. Board approval on February 18, 2016, paved the way for AMSA to develop its own official journal. The Journal Transition Committee chaired by Wes Schilling determined that the journal would be *Meat and Muscle Biology* with open access and only in digital format online. The Alliance of Crop, Soil and Environment Science Societies (ACSESS) was selected as the publisher, Ken McMillin was chosen as the first Editor-in-Chief, and the initial Editorial Board members were named and included Alexander Stelzleni, Robyn Warner, Heather Bruce, Michael Dikeman, Elisabeth Huff-Lonergan, Melvin Hunt, Robert Maddock, Thomas Powell, and Wes Schilling. The Editorial Board finalized the journal focus and its purpose, the Editorial Policy and Style Manual, and the selection of Surendranath Suman as the Associate Editor.

The journal focus would be on edible products from commonly farmed and/or harvested meat animal species with the goal to become the premier scientific journal for the world meat science community by offering a broad scope of peer-review manuscripts on meat science and muscle biology. High quality, pertinent, and timely basic and applied research would be published on meat and muscle biology derived from domestic mammals, avians, aquaculture species, amphibians, wild capture mammals, and synthetic meat analogs. Topics could include any factors affecting meat and its use, including production, quality, composition, processing, safety, and value of edible products including muscle biology and biochemistry, human nutrition, food safety, sensory evaluation, consumer science, new or improved meat related analytical procedures, processing and sensing technologies, and marketing of meat products.

The first papers were received into the *Meat and Muscle Biology* website in October 2016, and the first article published in the first volume in 2017 was Species-Specificity in Myoglobin Oxygenation and Reduction Potential Properties by Rajasekhara Nerimetla, Sadagopan Krishnan, Suman Mazumder, Smita Mohanty, Gretchen G. Mafi, Deborah L. VanOverbeke, and Ranjith Ramanathan of Oklahoma State University. The first Editorial Board meeting and a Reciprocation Session on the journal was during the 2017 Reciprocal Meat Conference. There were 29 articles published in the first volume (2017) of the journal.

In 2019, Elisabeth Huff-Lonergan became the Editor in Chief of the journal just after ACCESS moved their journals to another publisher. Surendranath Suman started as Associate Editor in Chief in 2016. Starting with Volume 4 in 2020, the journal was moved to the Iowa State University Digital Press. In 2020, *Meat and Muscle Biology* was the official journal for the proceedings papers of the International Congress of Meat Science and Technology (ICoMST). The journal has also published the abstracts of RMC (2016 - present). In 2021, the editorial board was expanded to include more international members to nearly 50% of the members from outside the United States. In August of 2021, the journal published its 200th paper. Brad Kim will become the Editor in Chief in July 2022.

Section IV - Intercollegiate Meat Judging, Meat Animal Eval, 4-H/FFA Contest

A. AMSA Involvement

In 1995, the National Live Stock and Meat Board dissolved; however, before dissolving, the organization gifted AMSA with the funds needed to conduct the 1996 intercollegiate meat judging program. This allowed time for involved parties to plan and raise money to continue with intercollegiate judging. AMSA staff in charge of the meats judging program included Thomas Powell, Jimmy Wise, Rachel Hamilton (tragically passed away in 2005), Megan Igo, Rachel Adams, and currently, Leslie Frenzel. USDA representatives responsible for beef grading and specifications include Rick Jones, Marty O'Connor, Jimmy Wise, and currently, Darrell Dowd. Jodie Pitcock has also provided an integral approach from USDA, as he creates and contributes the pricing sheets for the value-based classes for all contests throughout the year.

B. Funding

The loss of the National Live Stock and Meat Board as the major sponsor of intercollegiate meats judging forced AMSA to seek industry support for the program. Major meat processors that have provided financial and in-kind support include Cargill Corporation, Tyson Foods Corporation, JBS Foods, and Beef Products, Inc. Local and national commodity groups such as NCBA and NPPC have and continue to provide additional financial support. In recent years, the AMSA established a Mentorship program that provides funds for a variety of AMSA programs. AMSA Development Council Mentorships specifically identified to fund AMSA meat judging activities include Dell Allen, Craig Bacon, Paul Berg, Tom Carr, H. Russell Cross, Gordon Davis, William R. Jones, Benjy Mikel, Celia Miller, Jeff Savell, Gary Smith, and Jimmy Wise.

C. Contest Modifications and Additions

In 1980, the contests began allowing alternates to judge. This alternates division greatly expanded student participation. In 1999, one additional pork class (wholesale cut) was added in the afternoon to the contest format. Starting in 2007 meat judgers started filling out scantrons which enabled the contests to be scored electronically and allowed results to be posted online in Judging Card, a program developed and ran by Clay Ewell. Prior to Judging Card, Dr. C. Boyd Ramsey developed the scan cards used

starting in the early 1990's through 2006. In 2012, specific processed meats and retail cut classes were added to the list of eligible classes to increase product selection flexibility for official committees. Increased emphasis on processed meats has continued with the evolution of a processed meat contest in the near future. AMSA continues to work very closely with the Intercollegiate Meat Judging Coaches Association in assessing and implementing new classes to improve the educational value of the program. In 2022, a new contest, the South Plains Contest in Hereford, Texas, was established. It also includes a 4-H and FFA division.

In 2013, the National Collegiate Meat Animal Evaluation Contest came under the leadership of AMSA. This major contest began in 1964 and from 1995-2003, was held at United Livestock Marketing Services in St. Joseph, MO, with the Meats Division conducted at the University of Nebraska. In 2004 and 2005, the National Contest was held at South Dakota State University and Oklahoma State University from 2006-2011. Other universities that have hosted contests since 2012 include the University of Nebraska, Texas Tech University, and Kansas State University. A feeder calf grading and pricing component was added to the contest in 1996.

AMSA continues to support the National 4-H Meat Evaluation and Identification Contest held annually at Kansas State University. Several AMSA members are also very involved in providing guidance and serving as officials at the National FFA Contest that has been held at the University of Illinois, University of Kentucky, and Purdue University for the past 25 years. At the end of the 20th Century, leadership changes occurred for the Meat Technology CDE by adding corporate sponsors as committee members and rotating superintendents.

Senior Division Winners at the International

1926 University of Nebraska

1927 Iowa State College

1928 University of Nebraska

1929 Pennsylvania State College

1930 University of Missouri

1931 Kansas State College

1932 Ohio State University

1933 Ontario Agricultural College

1934 Kansas State College

1935 University of Nebraska*

1936 University of Missouri

1937 University of Nebraska

1938 University of Nebraska

1939 University of Wisconsin

1940 University of Nebraska*

1941 Oklahoma A&M College

1946 Oklahoma A&M College

1947 Ohio State University

1948 Oklahoma A&M College*

1949 Oklahoma A&M College

1950 West Virginia University

1951 Iowa State College

1952 University of Wisconsin

1953 Oklahoma A&M College

1954 Oklahoma A&M College*

1955 Iowa State College

1956 Iowa State College

1957 University of Wisconsin

1958 Texas A&M College

1959 Oklahoma State University

1960 Iowa State University*

1961 Oklahoma State University

1962 Iowa State University

1963 Oklahoma State University

1964 Oklahoma State University*

1965 Oklahoma State University

1966 Texas A&M University

1967 University of Nebraska

1968 Oklahoma State University

1969 Oklahoma State University*

1970 Texas A&M University

1971 Texas A&M University

1972 Kansas State University

1973 Texas A&M University*

1974 University of Nebraska

1975 University of Illinois

1976 Oklahoma State University

1977 Kansas State University

1978 University of Illinois

1979 Texas A&M University

1980 Texas A&M University

1981 Colorado State University

1982 University of Illinois*

1983 Texas A&M University

1984 South Dakota State

1985 Colorado State University

1986 Kansas State University

1987 Texas A&M University

1988 Texas A&M University*

1989 Texas Tech University

1990 Kansas State University

1991 Texas Tech University

1992 Kansas State University

1993 Texas A&M University

1994 Oklahoma State University

1995 Colorado State University

1996 Texas Tech University*

1997 Texas Tech University

1998 Texas A&M University

1999 Texas Tech University

2000 Texas A&M University

2001 Texas A&M University*

2002 Oklahoma State University

2003 Texas Tech University

2004 Texas A&M University

2005 University of Illinois

2006 Texas A&M University

2007 Colorado State University

2008 Texas Tech University

2009 Texas Tech University*

2010 Colorado State University

2011 Texas Tech University

2012 Texas Tech University

2013 Texas Tech University

2014 Oklahoma State University

2015 Texas Tech University

2016 Oklahoma State University

2017 Texas Tech University

2018 Oklahoma State University

2019 Texas Tech University

2020 Texas Tech University

2021 Texas Tech University

*Rotating Trophy Retired

A-Division Winners at the High Plains Contest

1981 Tarleton State University
1982 Eastern Oklahoma State College
1983 East Texas State
1984 Tarleton State University
1985 University of New Mexico State
1986 Eastern Oklahoma State College
1987 Eastern Oklahoma State College
1988 Eastern Oklahoma State College
1989 University of Idaho
1990 Eastern Oklahoma State College
1991 Tarleton State University
1992 Clarendon College
1993 Tarleton State University
1994 Coffeyville Community College
1995 Eastern Oklahoma State College
1996 Eastern Oklahoma State College
1997 Eastern Oklahoma State College
1998 Clarendon College
1999 Eastern Oklahoma State College
2000 Eastern Oklahoma State College
2001 Eastern Oklahoma State College
2002 Clarendon College
2003 Garden City Community College
2004 Tarleton State University
2005 Clarendon College
2006 Clarendon College
2007 Clarendon College
2008 Clarendon College
2009 Tarleton State University
2010 Fort Scott Community College
2011 Clarendon College
2012 Fort Scott Community College
2013 Clarendon College
2014 Fort Scott Community College
2015 Garden City Community College
2016 Fort Scott Community College
2017 Fort Scott Community College
2018 Clarendon College
2019 Clarendon College
2020 Clarendon College
2021 Clarendon College

D. FFA

For many years, the meat contest had been led by Dr. Jay Lark (Oklahoma Panhandle State University), and Dr. Leon Wagley (New Mexico State University). Other committee members included Danny Ware, (NMSU), Dr. James White (Oklahoma State University), Dr. Randall Waters (University of Tennessee), and the meat science faculty at Kansas State University (Dr. Michael Dikeman, Dr. John Unruh, etc.).

In 1998, Dr. Rudy Tarpley (Eastern New Mexico University and now Tarleton State University) accepted the role as Superintendent for the Meat CDE. A new committee

was formed in 1999 with members of Dr. Randy Harp (Texas A&M Commerce), Dr. Benjy Mikel (University of Kentucky), Mr. Jodie Pitcock (USDA), and Mr. David Bishop (Ashland, OH). Dr. Renee King (Sheridan, WY) was added a few years later. From 2000 to 2016, Dr. Tarpley, Dr. Harp and Dr. Mikel each took their turn at serving as the Superintendent. During this time, new members and Superintendents were added. Mrs. Wendy Woerner (Lubbock, Texas) and Mr. Jake Nelson (Oklahoma State University and now Ralph's Packing Company, Perkins, OK) have been the most recent while Mr. Nelson is currently serving in the leadership role. Also, during this time, the committee engaged corporate sponsors to be involved as official committee members. Representatives from Tyson, Hormel and Cargill have been valuable assets to the fabric of the committee.

The contest/event site has changed from Dawson-Baker Packing Company (Louisville, KY) to the University of Kentucky, and then to the University of Illinois, and now Purdue University. Drs. Benjy Mikel, Tom Carr, Gregg Rentfrow, and now Stacey Zuelly have truly been instrumental in providing the facilities to host the event at their respective universities.

Dr. Zuelly is the contact at Purdue for current contests while Mr. Nelson is the current Superintendent and contact for the entire event.

Major advancements or changes to the Meat Technology CDE since 2000 has been the following:

- Coordination with the National 4-H Meat Judging Committee to standardize the retail identification names and cut list to enhance student education. Addition of cookery method.
- Addition of team activities
- Enhance training aids developed in conjunction with CEV/iCEV.
- Addition of processed meats to the standard of a fresh meat contest
- Counting all four team participants instead of allowance of a "drop score" for teams
- Modified the Beef Yield Grading scoring process
- Added new classes/activities for evaluation to be more industry relevant

E. 4-H

The American Royal 4-H Meats Judging Contest started as a 4-6 state contest by the first meats professor at Kansas State, Professor Davey Mackintosh sometime after WWII. As it grew in popularity, it later was designated as a Regional Contest by the National 4-H governing body. Terry Buker of the Missouri Farm Bureau became involved and assumed co-leadership responsibilities with Professor Macintosh, and after Prof Mackintosh retired in 1965, took over as Superintendent of the contest. When Dave Schafer became the Meats Extension Specialist at Kansas State University, his involvement started, and he worked with Terry Buker in organizing and hosting the contest. The National 4-H Council and USDA Extension were supporting several meats judging contests in several parts of the country at the time. Terry Buker, working with

Ken Johnson of The National Live Stock and Meat Board, received approval from the National 4-H Council to designate the American Royal Contest as the National Contest. Dave Schafer took on sole responsibilities as superintendent upon the retirement of Terry Buker.

During the years the contest was held in Kansas City, the home of the contest for several years was the Safeway Central Cutting warehouse. Since the National FFA convention was held in Kansas City for years, upon meats judging becoming a part of their activities, it was natural for them to host a National Contest at the American Royal during their convention. Since the 4-H contest was already a part of American Royal activities, the FFA and 4-H utilized the same materials but on different days. The National Live Stock and Meat Board was a supporter of the contest both financially and with personnel, with Jacque Filiatreau, who organized and supervised the college contests aiding with the 4-H and FFA contests.

In 1994, the Safeway Warehouse closed, and a different location was needed. At the invitation of Kansas State University, the contest was moved to the Manhattan campus and originally was organized and run by Dave Schafer as well as other meat faculty members. The contest continues to be held at Kansas State under the sponsorship of the American Royal and the American Meat Science Association.

F. Awards

Some additional Contest awards have been added to the program to reward excellence throughout the year. The Dell Allen Mentorship sponsors the All-American awards, which started in 2004, while the Rachel Hamilton Memorial Fund sponsors the Rachel Hamilton Spirit Awards. The Rachel Hamilton "Spirit Award" is presented at the High Plains Contest. The award was established to honor a member of each team selected by their peers whose winning approach exemplifies Rachel’s love of meats judging and makes them the teammate we all want to have.

In addition, the AMSA established the Intercollegiate Meat Judging Meritorious Service Award in 1993, with the first winner being Dr. Lowell Walters of Oklahoma State University. In addition, the recognition of 10-year and 20-year winning teams at the International Contest has enhanced the interest and support of former, as well as future students toward meat judging and eventually, careers in the meat and livestock industries. The past 25 years has also seen meat judging identified with other collegiate sports. Two Wall Street journal articles, a Sports Illustrated story, and being featured on ESPN’s radio show “The Playbook” affirm the growing awareness of Intercollegiate Meats Judging and solidify the importance of this invaluable program.

G. Current Contests

In an effort to expand the engagement with youth in the U.S., AMSA has developed a virtual clinic for youth, agricultural science teachers, county extension agents, and 4-H leaders to continue to train students. Also, AMSA has hosted a virtual meat judging four

contest series for continued development of young evaluators and keep them engaged in AMSA competitive events. The contest series have been hosted in the summer of 2021 and spring of 2022.

Senior Division Teams

Abilene Christian University
Auburn University
Brigham Young University
California Polytechnic
Clemson University
Colorado State University
Cornell University
Iowa State University
Kansas State University
Michigan State University
Mississippi State University
Montana State University
New Mexico State University
North Carolina State University
North Dakota State University
Ohio State University
Oklahoma State University
Oregon State University
Pennsylvania State University
Purdue University
South Dakota State University
Tarleton State University
Texas A&M University
Texas Tech University
University of Florida
University of Tennessee
University of Arizona
University of Guelph
University of Idaho
University of Illinois
University of Kentucky
University of Nebraska
University of Minnesota
University of Missouri
University of West Virginia
University of Wisconsin
University of Wyoming
Virginia Polytechnic Institute and State University
Washington State University
West Texas A&M University

A-Division Teams

Allen County Community College
Australian Collegiate National Team
Barton County Community College
Carl Sandburg College
Casper College
Cisco Community College
Clarendon College
Cloud County Community College
Coffeyville Community College
College of the Sequoias
East Texas State University
Eastern Oklahoma State College
Fort Scott Community College
Fort Hays State University
Garden City Community College
Illinois Central College
Kankakee Community College
Louisiana State University
New Mexico Junior College
Panhandle State College
Paris Junior College
Southern University
Tarleton State University
Texas State Technical Institute
Texas A&M University - Commerce
University of Georgia
University of Idaho
University of New Mexico State
Weatherford College
Western Texas College
Zamorano University

H. U.S. Department of Agriculture

The past 25 years have seen AMSA members not only play very important roles in several pivotal changes in USDA's policies, programs, and services but USDA AMSA members have made significant contributions to AMSA and meat science.

In the late 1990s, USDA-FSIS was in the early stages of implementing Hazard Analysis and Critical Control Point (HACCP) inspection regulations and AMSA members in USDA-ARS, academia, and industry worked closely to enhance food safety and support USDA-FSIS's HACCP regulation proposals and implementation. USDA-ARS scientists made important food safety contributions during this time including rapid detection of and interventions for *E. coli* O157:H7, co-development with Cargill AMSA members of hide-on carcass wash cabinets, and later, understanding lymph node contributions to *Salmonella* risk, and more recently, development of continuous and manual cloth-based sampling methods for pathogen detection.

On the meat quality side, AMSA members within USDA led a sentinel change to the USDA Quality Grade Standards for Carcass Beef. This change, commonly referred to

as the B maturity change, was implemented in 1997 and utilized meat science research conducted by AMSA members in academia to ensure beef carrying the USDA Select and USDA Choice Beef Grades was more consistent in palatability. Collaborations between ARS and AMS and other AMSA members resulted in a USDA meat tenderness certification program.

In December of 2003, when the first case of bovine spongiform encephalopathy (BSE) was found in the U.S. cattle herd, virtually overnight all export markets for U.S. beef disappeared. Once again, AMSA members within USDA were called upon to help utilize meat science and AMSA partners in both academia and industry to quickly establish a science-based program to assure U.S. trading partners of the safety of U.S. beef including the A-40 certification program to satisfy the Japanese government and Japanese consumers that U.S. beef was sourced from cattle at an age below which BSE was a concern. This partnership that USDA had with AMSA members in academia and industry proved invaluable in the U.S. regaining its prominence as a major global beef exporter. Later, the AMSA grading standards committee recommended use of dentition to assess maturity of cattle <30 months of age which was implemented in 2016.

In 2008, one of USDA's largest suppliers to the National School Lunch Program and other national food assistance programs, Hallmark/Westland Meat Packing Company, was found to be in violation of commonly accepted animal welfare practices and was placing beef from non-ambulatory cattle into the supply chain and, specifically, the USDA purchase program. To address concerns about the safety of beef purchased by USDA, AMSA members within USDA with support from the meat science community established a system that required all suppliers to be certified as in compliance with animal handling guidelines, commonly referred to as the AMI Animal Handling Guidelines, that were developed and adopted by AMSA members in both academia and industry.

USDA-ARS scientists also contributed to significant revisions in USDA-AMS School Lunch Program meat purchase specifications and program procedures to enhance testing and use of resources.

However, possibly the most notable contributions AMSA members have made to USDA programs over the past 25 years has been the modernization of the USDA beef grading program through the adoption of instrument technology. After decades of research by AMSA members, academia, and industry, in partnership with USDA, this research culminated in 2003 with USDA approving instruments to predict ribeye area, in 2005 to predict USDA Yield Grades, and in 2006, most significantly, the technology was approved for assessment of marbling scores. Today, the system developed by USDA-ARS scientists has been implemented by most medium and large beef plants in the U.S., Canada, and Mexico with some adoption in Australia, Russia, Argentina, and Kazakhstan. The AMSA grading standards committee continues to assist USDA with

evaluation and validation of grading camera system upgrades in cooperation with AMS and ARS.

USDA AMSA members also have contributed to AMSA leadership through the Board of Directors, as an AMSA President, RMC Chair, and an AMSA member, Mindy Brashears, served as USDA Under Secretary of Food Safety 2020-2021. In the past 25 years indeed USDA AMS, ARS, FSIS, and AMSA have collaborated on numerous issues that have greatly affected the U.S. meat industry.

Appendix A

List of Previous RMCs

Year	RMC	Location
1948	1st	Chicago, Illinois
1949	2nd	Chicago, Illinois
1950	3rd	Chicago, Illinois
1951	4th	Chicago, Illinois
1952	5th	Chicago, Illinois
1953	6th	Chicago, Illinois
1954	7th	Chicago, Illinois
1955	8th	Chicago, Illinois
1956	9th	Chicago, Illinois
1957	10th	Chicago, Illinois
1958	11th	Chicago, Illinois
1959	12th	Kellogg Center-Michigan State University
1960	13th	Chicago, Illinois
1961	14th	University of Tennessee
1962	15th	The Ohio State University
1963	16th	Oklahoma State University
1964	17th	University of Wisconsin
1965	18th	Kansas State University
1966	19th	Cornell University
1967	20th	University of Nebraska
1968	21st	University of Georgia
1969	22nd	California State Polytechnic College
1970	23rd	University of Florida
1971	24th	University of Kentucky
1972	25th	Iowa State University
1973	26th	The Pennsylvania State University
1974	27th	Texas A&M University
1975	28th	University of Missouri
1976	29th	Brigham Young University
1977	30th	Auburn University
1978	31st	University of Connecticut
1979	32nd	South Dakota State University
1980	33rd	Purdue University
1981	34th	Oregon State University
1982	35th	Virginia Polytechnic Institute and State University
1983	36th	North Dakota State University

Year	RMC	Location
1984	37th	Texas Tech University
1985	38th	Louisiana State University
1986	39th	University of Illinois
1987	40th	University of Minnesota
1988	41st	University of Wyoming
1989	42nd	University of Guelph-Guelph, Canada
1990	43rd	Mississippi State University
1991	44th	Kansas State University
1992	45th	Colorado State University
1993	46th	University of Nebraska-Lincoln
1994	47th	The Pennsylvania State University
1995	48th	Texas A&M University-San Antonio
1996	49th	Brigham Young University
1997	50th	Iowa State University
1998	51st	University of Connecticut
1999	52nd	Oklahoma State University
2000	53rd	The Ohio State University
2001	54th	Indianapolis, Indiana
2002	55th	Michigan State University
2003	56th	University of Missouri
2004	57th	University of Kentucky
2005	58th	ICoMST (USDA) Baltimore, Maryland
2006	59th	University of Illinois
2007	60th	South Dakota State University
2008	61st	University of Florida
2009	62nd	University of Arkansas
2010	63rd	Texas Tech University
2011	64th	Kansas State University
2012	65th	North Dakota State University
2013	66th	Auburn University
2014	67th	University of Wisconsin
2015	68th	University of Nebraska
2016	69th	Angelo State University
2017	70th	Texas A&M University
2018	71	Kansas City
2019	72	Colorado State University
2020	73	ICoMST (USDA) Orlando, Florida
2021	74	University of Nevada-Reno
2022	75	Des Moines, IA

Appendix B

First RMC Attendees in 1948

Name	Affiliation
G.B. Tupper	Russel-Harrington Cutlery Co.
J.E. Comfort	University of Missouri
O.G. Hankins	U.S. Department of Agriculture
L.J. Bratzler	Michigan State College
John A. Christian	University of Connecticut
James A. Christian	Pennsylvania State College
L.V. Tirrell	University of New Hampshire
J.F. Witter	University of Maine
M.H. Kerr	University Of Maryland
E.D. Farwell	Michigan State College
V.R. Cahill	The Ohio State University
George MacDonald	Meat Board
W.H. Tomhave	Pennsylvania State University
R.C. Pollock	Meat Board
L.E. Kunkle	The Ohio State University
P.T. Zigler	Pennsylvania State College
R.E. Snyder	Texas A&M University
E.L. Lasley	North Dakota Agr. College
P.A. Anderson	University of Minnesota
E.A. Pierce	South Dakota State College
J.W. Cole	University of Tennessee
J.C. Hillier	Purdue University
B.R. McClurg	Iowa State University
N.S. Hale	University of Massachusetts
E.J. Wilford	University of Kentucky
A.Z. Palmer	University of Missouri
L.E. Walters	Oklahoma A&M College
Boyd Whittle	University of Illinois
V.K. Johnson	University of Illinois
G.W. Van der Noot	Rutgers University
J.J. Miller	Cornell University
M.H. Hazaleus	Colorado State College
J.B. Francioni, Jr.	Louisiana State University
W.J. Loeffel	University of Nebraska
D.L. Mackintosh	Kansas State College
R.L. Henrickson	Kansas State College
A.W. Oliver	Oregon State College
J.J. Wanderstock	Cornell University
G.H. Wellington	Cornell University

Name	Affiliation
R.W. Bray	University of Wisconsin
Sleeter Bull	University of Illinois
R.H. Black	West Virginia University
W.A. Cowan	University of Massachusetts
T.N. Blumer	University of North Carolina
D.E. Brady	University of North Carolina
M.O. Cullen	Meat Board

Appendix C

Past Conference Chairs of the American Meat Science Association

1948-1951 ..... **W. H. Tomhave**, The Pennsylvania State University
1952 ..... **R. W. Bray**, University of Wisconsin
1953 ..... **J. W. Cole**, University of Tennessee
1954 ..... **L. E. Walters**, Oklahoma State University
1955 ..... **E. A. Kline**, Iowa State University
1956 ..... **A. M. Pearson**, Michigan State University
1957 ..... **T. N. Blumer**, North Carolina State University
1958 ..... **V. R. Cahill**, The Ohio State University
1959 ..... **C. H. Adams**, University of Nebraska
1960 ..... **G. H. Wellington**, Cornell University
1961 ..... **L. E. Kunkle**, The Ohio State University
1962 ..... **J. C. Pierce**, U. S. Department of Agriculture
1963 ..... **J. D. Kemp**, University of Kentucky
1964 ..... **E. J. Briskey**, University of Wisconsin
1965 ..... **E. A. Pierce**, Cornell University
1966 ..... **L. J. Bratzler**, Michigan State University
1967 ..... **Z. L. Carpenter**, Texas A&M University
1968 ..... **R. B. Sleeth**, Armour and Company
1969 ..... **M. D. Judge**, Purdue University
1970 ..... **A. M. Mullins**, University of Idaho
1971 ..... **H. B. Hedrick**, University of Missouri
1972 ..... **C. E. Allen**, University of Minnesota
1973 ..... **J. D. Sink**, The Pennsylvania State University
1974 ..... **J. A. Christian**, University of Georgia
1975 ..... **G. C. Smith**, Texas A&M University
1976 ..... **W. C. Stringer**, University of Missouri
1977 ..... **D. M. Kinsman**, University of Connecticut
1978 ..... **V. R. Cahill**, The Ohio State University
1979 ..... **M. E. Dikeman**, Kansas State University
1980 ..... **E. D. Aberle**, Purdue University
1981 ..... **D. H. Kropf**, Kansas State University
1982 ..... **G. R. Schmidt**, Colorado State University
1983 ..... **T. R. Carr**, University of Illinois
1984 ..... **L. J. Ernst**, American Can Company
1985 ..... **R. G. Kauffman**, University of Wisconsin
1986 ..... **J. C. Forrest**, Purdue University
1987 ..... **J. A. Carpenter**, University of Georgia
1988 ..... **C. L. Kastner**, Kansas State University
1989 ..... **D. B. Anderson**, Lilly Research Laboratories
1990 ..... **W. R. Usborne**, University of Guelph
1991 ..... **M. C. Hunt**, Kansas State University
1992 ..... **J. T. Keeton**, Texas A&M University
1993 ..... **C. R. Calkins**, University of Nebraska

1994 ..... **R. E. Rust**, Iowa State University
1995 ..... **W. R. Henning**, The Pennsylvania State University
1996 ..... **D. M. Allen**, Excel Corporation
1997 ..... **L. W. Hand**, Protein Technologies International
1998 ..... **L. C. Faustman**, University of Connecticut
1999 ..... **J. R. Claus,** Virginia Polytechnic Institute and State University
2000 ..... **H. G. Dolezal**, Excel Corporation
2001 ..... **D. E. Burson**, University of Nebraska
2002 ..... **C. D. Bacon,** Tyson Foods, Inc.
2003 ..... **D. S. Hale**, Texas A&M University
2004 ..... **E. A. Boyle**, Kansas State University
2005 ..... **S.G. Campano**, Trumark, a Division of Hawkins, Inc.
2006 ..... **R. D. Huffman**, American Meat Institute Foundation
2007 ..... **S. J. Jones,** University of Nebraska
2008 ..... **E.P. Berg**, North Dakota State University
2009 ..... **H. K. Johnson**, H & K Johnson & Associates
2010 ..... **R. J. Delmore**, Jr., California Polytechnic State University
2011 ..... **S. M. Lonergan**, Iowa State University
2012 ..... **J. A. Unruh**, Kansas State University
2013 ..... **D. J. Hanson**, North Carolina State University
2014 ..... **B. L. Booren**, American Meat Institute
2015 ..... **T.D. Pringle**, University of Georgia
2016 ..... **D. L. Schaefer**, Cargill
2017 ..... **S.K.K. Beals**, US Foods
2018 ..... **D. R. Woerner**, Colorado State University
2019 ..... **T. L. Wheeler**, USDA-MARC-ARS
2020 ..... **S. M. Lonergan**, Iowa State University and **B. C. Fields**, PIC
2021 ..... **W. Schilling**, Mississippi State University
2022 ..... **A.C. Dilger**, University of Illinois

Appendix D

Past Officers of the American Meat Science Association

PRESIDENT

R. W. Bray, University of Wisconsin 1965
L. E. Kunkle, The Ohio State University 1966
J. W. Cole, University of Tennessee 1967
L. J. Bratzler, Michigan State University 1968
Z. L. Carpenter, Texas A&M University 1969
G. H. Wellington, Cornell University 1970
M. D. Judge, Purdue University 1971
A. M. Mullins, University of Idaho 1972
H. B. Hedrick, University of Missouri 1973
R. B. Sleeth, Armour and Company 1974
J. D. Sink, The Pennsylvania State University 1975
J. D. Kemp, University of Kentucky 1976
G. C. Smith, Texas A&M University 1977
L. L. Borchert, Oscar Mayer and Company 1978
D. M. Kinsman, University of Connecticut 1979
R. A. Field, University of Wyoming 1980
R. G. Cassens, University of Wisconsin 1981
D. L. Huffman, Auburn University 1982
M. E. Dikeman, Kansas State University 1983
H. R. Cross, Texas A&M University 1984
E. D. Aberle, University of Nebraska 1985
D. H. Kropf, Kansas State University 1986
W. G. Moody, University of Kentucky 1987
R. G. Kauffman, University of Wisconsin 1988
W. C. Schwartz, Swift-Eckrich, Inc. 1989
J. C. Acton, Clemson University 1990
F. C. Parrish, Jr., Iowa State University 1991
R. W. Mandigo, University of Nebraska 1992
T. R. Carr, University of Illinois 1993
C. L. Kastner, Kansas State University 1994
D. B. Anderson, Lilly Research Laboratories 1995
M. C. Hunt, Kansas State University 1996
C. R. Calkins, University of Nebraska 1997
D. M. Allen, Excel Corporation 1998
J. T. Keeton, Texas A&M University 1999
L. W. Hand, Protein Technologies International 2000
C. A. Hollingsworth, Better Built Foods 2001
J. W. Savell, Texas A&M University 2002
J. G. Sebranek, Iowa State University 2003
C. D. Bacon, Tyson Foods, Inc. 2004
A. M. Booren, Michigan State University 2005

D. R. Buege, University of Wisconsin 2006
D. S. Hale, Texas A&M University 2007
C. M. Schultz Kaster, Farmland Foods, Inc. 2008
S. G. Campano, Hawkins, Inc. 2009
K. E. Belk, Colorado State University 2010
R. D. Huffman, Maple Leaf Foods 2011
W. B. Mikel, Mississippi State University 2012
S. J. Eilert, Cargill 2013
R. J. Delmore, Jr. Colorado State University 2014
J. B. Morgan, Performance Food Group 2015
B. L. Gwartney, USDA-AMS 2016
S.J. Goll, Tyson Foods, Inc 2017
R.K. Miller 2018
E. P. Berg 2019
S. T. Larsen 2020
T.D. Pringle 2021
A.T. Brackenridge 2022

PRESIDENT-ELECT

L. E. Kunkle, The Ohio State University 1965
J. W. Cole, University of Tennessee 1966
L. J. Bratzler, Michigan State University 1967
Z. L. Carpenter, Texas A&M University 1968
G. H. Wellington, Cornell University 1969
M. D. Judge, Purdue University 1970
A. M. Mullins, University of Idaho 1971
H. B. Hedrick, University of Missouri 1972
R. B. Sleeth, Armour and Company 1973
J. D. Sink, The Pennsylvania State University 1974
J. D. Kemp, University of Kentucky 1975
G. C. Smith, Texas A&M University 1976
L. L. Borchert, Oscar Mayer and Company 1977
D. M. Kinsman, University of Connecticut 1978
R. A. Field, University of Wyoming 1979
R. G. Cassens, University of Wisconsin 1980
D. L. Huffman, Auburn University 1981
M. E. Dikeman, Kansas State University 1982
H. R. Cross, U. S. Department of Agriculture 1983
E. D. Aberle, University of Nebraska 1984
D. H. Kropf, Kansas State University 1985
W. G. Moody, University of Kentucky 1986
R. G. Kauffman, University of Wisconsin 1987
W. C. Schwartz, Swift-Eckrich, Inc. 1988
J. C. Acton, Clemson University 1989
F. C. Parrish, Jr., Iowa State University 1990

R. W. Mandigo, University of Nebraska 1991
T. R. Carr, University of Illinois 1992
C. L. Kastner, Kansas State University 1993
D. B. Anderson, Lilly Research Laboratories 1994
M. C. Hunt, Kansas State University 1995
C. R. Calkins, University of Nebraska 1996
D. M. Allen, Excel Corporation 1997
J. T. Keeton, Texas A&M University 1998
L. W. Hand, Protein Technologies International 1999
C. A. Hollingsworth, Keystone Foods 2000
J. W. Savell, Texas A&M University 2001
J. G. Sebranek, Iowa State University 2002
C. D. Bacon, Tyson Foods, Inc. 2003
A. M. Booren, Michigan State University 2004
D. R. Buege, University of Wisconsin 2005
D. S. Hale, Texas A&M University 2006
C.M. Schultz Kaster, Farmland Foods, Inc. 2007
S. G. Campano, Hawkins, Inc. 2008
K. E. Belk, Colorado State University 2009
R. D. Huffman, Maple Leaf Foods 2010
W. B. Mikel, Mississippi State University 2011
S. J. Eilert, Cargill 2012
R. J. Delmore, Jr. California Polytechnic State University 2013
J. B. Morgan, Zoetis 2014
B. L. Gwartney, USDA-AMSA 2015
S. J. Goll, Tyson Foods, Inc. 2016
R.K. Miller, Texas A&M University 2017
E.P. Berg 2018
S. T. Larsen 2019
T.D. Pringle 2020
A.T. Brackenridge 2021
G. Mafi 2022

EXECUTIVE DIRECTOR

H. K. Johnson ..... 1996 - 1997
T. H. Powell ..... 1997 - 2018
C.S. Kaster ..... 2019 - Present

SECRETARY-TREASURER

W. C. Sherman, National Live Stock and Meat Board 1965-1975
H. K. Johnson, National Live Stock and Meat Board 1975-1996
and National Cattlemen's Beef Association
D. J. Meisinger, National Pork Board 1996-2002
C. A. Hollingsworth, Keystone Foods 2002-2006
C. B. Frye, Burke Corporation 2006-2015

S. G. Campano, Hawkins 2015-2018
S. Shivas, Tyson Foods, Inc. 2018-2021
J. Hodgen, Merck Animal Health ..... 2021– Present

Appendix E

Development Council Officers

Year	End Date	Position	First Name	Last Name
2001	2004	Member	Larry	Borchert
2001	2008	Member	Joseph	Harris
2001	2008	Member	H. Kenneth	Johnson
2001	2006	Member	Curtis	Kastner
2001	2002	Ex Officio	David	Meisinger
2001	2006	Member	William	Moody
2001	2018	Ex Officio	Thomas	Powell
2001	2002	Secretary/Treasurer	David	Meisinger
2001	2007	Member	R. B.	Sleeth
2002	2004	Member	Larry	Borchert
2002	2008	Member	Joseph	Harris
2002	2006	Ex Officio	C.	Hollingsworth
2002	2008	Member	H. Kenneth	Johnson
2002	2006	Member	Curtis	Kastner
2002	2002	Ex Officio	David	Meisinger
2002	2006	Member	William	Moody
2002	2018	Ex Officio	Thomas	Powell
2002	2002	Secretary/Treasurer	David	Meisinger
2002	2007	Member	R. B.	Sleeth
2003	2004	Member	Larry	Borchert
2003	2008	Member	Joseph	Harris
2003	2006	Ex Officio	C.	Hollingsworth
2003	2008	Member	H. Kenneth	Johnson
2003	2006	Member	Curtis	Kastner
2003	2006	Member	William	Moody
2003	2018	Ex Officio	Thomas	Powell
2003	2006	Secretary/Treasurer	C. Ann	Hollingsworth
2003	2007	Member	R. B.	Sleeth
2004	2007	Member	Larry	Borchert
2004	2008	Member	Joseph	Harris
2004	2006	Ex Officio	C.	Hollingsworth
2004	2008	Member	H. Kenneth	Johnson
2004	2006	Member	Curtis	Kastner
2004	2006	Member	William	Moody
2004	2018	Ex Officio	Thomas	Powell
2004	2006	Secretary/Treasurer	C. Ann	Hollingsworth
2004	2007	Member	R. B.	Sleeth
2005	2007	Member	Larry	Borchert
2005	2008	Member	Joseph	Harris

Year	End Date	Position	First Name	Last Name
2005	2006	Ex Officio	C.	Hollingsworth
2005	2008	Member	H. Kenneth	Johnson
2005	2006	Member	Curtis	Kastner
2005	2006	Member	William	Moody
2005	2006	Secretary/Treasurer	C. Ann	Hollingsworth
2005	2007	Member	R. B.	Sleeth
2006	2009	Member	Elton	Aberle
2006	2009	Member	David	Anderson
2006	2007	Member	Larry	Borchert
2006	2015	Ex Officio	Casey	Frye
2006	2008	Member	Joseph	Harris
2006	2006	Ex Officio	C.	Hollingsworth
2006	2008	Member	H. Kenneth	Johnson
2006	2006	Member	Curtis	Kastner
2006	2006	Member	William	Moody
2006	2018	Ex Officio	Thomas	Powell
2006	2006	Secretary/Treasurer	C. Ann	Hollingsworth
2006	2007	Member	R. B.	Sleeth
2007	2010	Member	Dell	Allen
2007	2008	Member	Joseph	Harris
2007	2008	Member	H. Kenneth	Johnson
2007	2015	Secretary/Treasurer	Casey	Frye
2007	2018	Ex Officio	Thomas	Powell
2007	2013	Member	M. James	Riemann
2007	2007	Member	R. B.	Sleeth
2008	2009	Vice Chair	Elton	Aberle
2008	2010	Member	Dell	Allen
2008	2009	Chair	David	Anderson
2008	2011	Member	Donald	Beermann
2008	2009	Ex Officio	Stephen	Campano
2008	2008	Member	Joseph	Harris
2008	2011	Member	William	Henning
2008	2008	Member	H. Kenneth	Johnson
2008	2015	Secretary/Treasurer	Casey	Frye
2008	2018	Ex Officio	Thomas	Powell
2008	2013	Member	M. James	Riemann
2009	2011	Chair	Elton	Aberle
2009	2010	Member	Dell	Allen
2009	2012	Member	David	Anderson
2009	2015	Secretary/Treasurer	Casey	Frye
2009	2018	Ex Officio	Thomas	Powell
2009	2013	Member	M. James	Riemann

Year	End Date	Position	First Name	Last Name
2010	2012	Member	Elton	Aberle
2010	2010	Member	Dell	Allen
2010	2012	Member	David	Anderson
2010	2013	Vice Chair	Gordon	Davis
2010	2015	Secretary/Treasurer	Casey	Frye
2010	2011	Ex Officio	Randy	Huffman
2010	2018	Ex Officio	Thomas	Powell
2010	2013	Member	M. James	Riemann
2011	2012	Member	Elton	Aberle
2011	2012	Member	David	Anderson
2011	2013	Vice Chair	Gordon	Davis
2011	2012	Member	William	Henning
2011	2015	Secretary/Treasurer	Casey	Frye
2011	2011	Ex Officio	Randy	Huffman
2011	2012	Member	Kenneth	McMillin
2011	2018	Ex Officio	Thomas	Powell
2011	2013	Member	M. James	Riemann
2012	2012	Member	Elton	Aberle
2012	2012	Member	David	Anderson
2012	2015	Member	Stephen	Campano
2012	2015	Secretary/Treasurer	Casey	Frye
2012	2013	Vice Chair	Gordon	Davis
2012	2014	Member	William	Henning
2012	2015	Member	Collette	Kaster
2012	2014	Chair	Kenneth	McMillin
2012	2018	Ex Officio	Thomas	Powell
2012	2013	Member	M. James	Riemann
2013	2015	Member	Keith	Belk
2013	2015	Member	Stephen	Campano
2013	2013	Vice Chair	Gordon	Davis
2013	2015	Secretary/Treasurer	Casey	Frye
2013	2014	Member	William	Henning
2013	2015	Member	Collette	Kaster
2013	2014	Chair	Kenneth	McMillin
2013	2018	Ex Officio	Thomas	Powell
2013	2013	Member	M. James	Riemann
2014	2015	Member	Keith	Belk
2014	2015	Member	Stephen	Campano
2014	2017	Member	Tom	Carr
2014	2015	Secretary/Treasurer	Casey	Frye
2014	2016	Member	Scott	Eilert
2014	2014	Member	William	Henning
2014	2015	Member	Collette	Kaster

Year	End Date	Position	First Name	Last Name
2014	2015	Chair	Kenneth	McMillin
2014	2018	Ex Officio	Thomas	Powell
2015	2016	Chair	Keith	Belk
2015	2018	Treasurer	Stephen	Campano
2015	2017	Member	Tom	Carr
2015	2015	Secretary/Treasurer	Casey	Frye
2015	2016	Member	Scott	Eilert
2015	2015	Member	Collette	Kaster
2015	2018	Member	Steven	Larsen
2015	2015	Chair	Kenneth	McMillin
2015	2018	Member	Wendy	Pinkerton
2015	2018	Ex Officio	Thomas	Powell
2016	2018	Chair	Keith	Belk
2016	2018	Treasurer	Stephen	Campano
2016	2017	Member	Tom	Carr
2016	2019	Member	Scott	Eilert
2016	2018	Secretary/Treasurer	Steve	Campano
2016	2018	Member	Steven	Larsen
2016	2017	Member	Kenneth	McMillin
2016	2018	Member	Wendy	Pinkerton
2016	2018	Ex Officio	Thomas	Powell
2017	2018	Chair	Keith	Belk
2017	2018	Treasurer	Stephen	Campano
2017	2017	Member	Tom	Carr
2017	2020	Member	H.	Cross
2017	2019	Member	Scott	Eilert
2017	2018	Secretary/Treasurer	Steve	Campano
2017	2018	Member	Steven	Larsen
2017	2017	Member	Kenneth	McMillin
2017	2020	Member	Brad	Morgan
2017	2018	Member	Wendy	Pinkerton
2017	2018	Ex Officio	Thomas	Powell
2018	2019	Member	Keith	Belk
2018	2018	Treasurer	Stephen	Campano
2018	2020	Member	H.	Cross
2018	2019	Member	Scott	Eilert
2018	2018	Secretary/Treasurer	Steve	Campano
2018	2021	Secretary/Treasurer	Susan	Shivas
2018	2018	Member	Steven	Larsen
2018	2020	Vice Chair	William	Mikel
2018	2020	Member	Brad	Morgan
2018	2020	Chair	Wendy	Pinkerton
2018	2018	Ex Officio	Thomas	Powell

Year	End Date	Position	First Name	Last Name
2018	2021	Treasurer	Susan	Shivas
2019	2022	Member	Sharon	Beals
2019	2019	Member	Keith	Belk
2019	2020	Member	H.	Cross
2019	2019	Member	Scott	Eilert
2019	2022	Member	Randal	Garrett
2019	2021	Secretary/Treasurer	Susan	Shivas
2019	2025	Staff	Collette	Kaster
2019	2019	Staff	Deidrea	Mabry
2019	2020	Vice Chair	William	Mikel
2019	2020	Member	Brad	Morgan
2019	2020	Staff	Morgan	Pfeiffer
2019	2020	Chair	Wendy	Pinkerton
2019	2021	Treasurer	Susan	Shivas
2020	2022	Member	Sharon	Beals
2020	2023	Member	H.	Cross
2020	2022	Vice Chair	Randal	Garrett
2020	2025	Staff	Collette	Kaster
2020	2021	Secretary/Treasurer	Susan	Shivas
2020	2021	Ex Officio	Steven	Larsen
2020	2022	Chair	William	Mikel
2020	2023	Member	Brad	Morgan
2020	2020	Staff	Morgan	Pfeiffer
2020	2020	Chair	Wendy	Pinkerton
2020	2021	Treasurer	Susan	Shivas
2021	2022	Member	Sharon	Beals
2021	2023	Member	H.	Cross
2021	2022	Vice Chair	Randal	Garrett
2021	2024	Treasurer	Jennie	Hodgen
2021	2025	Staff	Collette	Kaster
2021	2021	Secretary/Treasurer	Susan	Shivas
2021	2021	Ex Officio	Steven	Larsen
2021	2025	Staff	Deidrea	Mabry
2021	2022	Chair	William	Mikel
2021	2023	Member	Brad	Morgan
2021	2021	Member	Wendy	Pinkerton
2021	2021	Treasurer	Susan	Shivas
2021	2024	Member	Amy	Steward
2022	2025	Member	Sharon	Beals
2022	2023	Member	H.	Cross
2022	2022	Vice Chair	Randal	Garrett
2022	2024	Treasurer	Jennie	Hodgen
2022	2025	Staff	Collette	Kaster

Year	End Date	Position	First Name	Last Name
2022	2025	Staff	Deidrea	Mabry
2022	2022	Chair	William	Mikel
2022	2023	Member	Brad	Morgan
2022	2024	Member	Amy	Steward

Appendix F

Student Board of Directors

Year	Board Members
2002-2003	Jennifer Leheska, Texas Tech University, President Christine Quinlan, Michigan State University, East Region Director Terry Houser, Iowa State University, Midwest Region Director Jason Behrends, Texas A&M University, South Region Director Justin Ransom, Colorado State University, West Region Director Janeal Stephens, Kansas State University, At-Large Director Ann Waylan, Kansas State University, At-Large Director
2003-2004	Christine Quinlan, Michigan State University, President Jennifer Leheska, Texas Tech University, Past President Stacy Scramlin, University of Kentucky, East Region Director Jeff Sindelar, Iowa State University, Midwest Region Director Andy King, Texas A&M University, South Regional Director Keith Underwood, University of Wyoming, West Region Director Wendy Palmore, Texas Tech University, At-Large Director Angela Reicks, Texas Tech University, At-Large Director
2004-2005	Wendy Palmore, Texas Tech University, President Christine Quinlan, Michigan State University, Past President Stacy Scramlin, University of Kentucky, East Region Jessica Meisinger, University of Nebraska, Midwest Region Betsy Booren, Texas A&M University, South Region Shane Thompson, University of Wyoming, West Region Adam Tittor, Oklahoma State University, At-Large Director Ryan Rhoades, Texas A&M University, At-Large Director
2005-2006	Betsy Booren, Texas A&M University, President Wendy Palmore, Texas Tech University, Past President Ryan Cox, University of Kentucky, East Region Director Chad Carr, University of Missouri, Midwest Region Director Kristin Voges, Texas A&M, South Region Director Corri Rekow, University of Wyoming, West Region Director Carrie Adams, Texas A&M University, At-Large Director Christopher Raines, Kansas State University, At-Large Director
2006-2007	Kristin Voges, Texas A&M University, President Betsy Booren, Texas A&M University, Past President Stacy Scramlin, University of Kentucky, East Region Director Lyda Garcia, Texas Tech University, South Region Director Dale Woerner, Director, Colorado State University, West Region Director Scott Grumbles, Oklahoma State University, At-Large Director Ryan Cox, University of Kentucky, At-Large Director

2007-2008	Dale Woerner, Colorado State University, President Kristin Voges, Texas A&M University, Past President Georgina Anderson, University of Kentucky, East Region Director Jennifer Gunderson, Kansas State University, Midwest Region Director Corri Rekow, Texas Tech University, South Region Director Scott Grumbles, Oklahoma State University, At-Large Director David Newman, North Dakota State University, At-Large Director Andrea Garmyn, Kansas State University, At-Large Director
2008-2009	Andrea Garmyn, Oklahoma State University, President Dale Woerner, Colorado State University, Past President Shollie Behrends, Mississippi State University, East Region Director Noah Hall, North Dakota State University, Midwest Region Director Jessica Igo, Texas Tech University, South Region Director Ashley Lepper, North Dakota State University, At-Large Director Amanda Gipe, Kansas State University, At-Large Director Jenna Pool, Texas Tech University, At-Large Director
2009-2010	Jessica Igo, Texas Tech University, President Andrea Garmyn, Oklahoma State University, Past President Amanda Gipe, Pennsylvania State University, East Region Director Erin Harris, North Dakota State University, Midwest Region Director Laura May, Texas A&M University, South Region Director Scott Howard, Colorado State University, West Region Director Ashley Lepper, North Dakota State University, At-Large Director Ryan Murphy, Colorado State University, At-Large Director
2010-2011	Scott Howard, Colorado State University, President Jessica Igo, Colorado State University, Past President Travis Arp, University of Florida, East Region Director Carrie Highfill, Kansas State University, Midwest Region Director Shanna Ward, Texas Tech University, South Region Director Ariel Winegar, California Polytechnic State University, West Region Director Austen Germolus, North Dakota State University, At-Large Director Nathan Tapp, University of Arkansas, At-Large Director
2011-2012	Carrie Highfill, Kansas State University, President Scott Howard, Colorado State University, Past President Melissa Miller, University of Georgia, East Region Director Bryce Gerlach, Kansas State University, Midwest Region Director Meagan Igo, Texas A&M University, South Region Director Rebecca Tokach, Colorado State University, West Region Director Collin Corbin, Texas Tech University, At-Large Director Travis O'Quinn, Colorado State University, At-Large Director

2012-2013	Rebecca Acheson, Colorado State University, President Carrie Garner, Kansas State University, Past President Staci DeGeer, Auburn University, East Region Director Dustin Mohrhauser, South Dakota State University, Midwest Region Director Jace Hollenbeck, University of Arkansas, South Region Director Jordan McHenry, Colorado State University, West Region Director Leslie Frenzel, Texas A&M University, At-Large Director Amanda King, University of Wisconsin, At-Large Director
2013-2014	Amanda King, University of Wisconsin-Madison, President Rebecca Acheson, Colorado State University, Past President Staci DeGeer, Auburn University, East Region Director Aaron Tapian, Kansas State University, Midwest Region Director KatieRose McCullough, Oklahoma State University, South Region Director Megan Webb, Colorado State University, West Region Director Megan Myers, Iowa State University, At-Large Director Loni Woolley, Texas Tech University, At-Large Director
2014-2015	Loni Woolley, Texas Tech University, President Amanda King, University of Wisconsin-Madison, Past President Macc Regdon, University of Georgia, East Region Director Ashley Collins, Kansas State University, Midwest Region Director Bo Hutto, Texas Tech University, South Region Director Tanner Adams, Colorado State University, West Region Director Josh Hasty, Fresno State University, At-Large Director Hannah Shetters, University of Florida, At-Large Director
2015-2016	Bo Hutto, Texas Tech University, President Loni Woolley, Texas Tech University, Past President Mary Ann Matney, Kansas State University, Midwest Region Director Morgan Neilson, Oklahoma State University, South Region Director Brittney Scott, Colorado State University, West Region Director Chad Bower, University of Nebraska, At-Large Director Dan Crownover, Texas Tech University, At-Large Director Kassandra Ognoskie, Kansas State University, At-Large Director
2016-2017	Morgan Neilson, Oklahoma State University, President Bo Hutto, Texas Tech University, Past President Judson Smith, Auburn University, East Region Director Hope Voegele, University Nebraska, Midwest Region Director Nick Hardcastle, Texas Tech University, South Region Director Devin Gredell, Colorado State University, West Region Director Drew Cassens, Texas A&M University, At-Large Director Carla Weissend, Colorado State University, At-Large Director

2017-2018	Drew Cassens, Oklahoma State University, President Morgan Pfeiffer, Oklahoma State University, Past-President Brian Patterson, Iowa State University, Midwest Region Director Hope Voegele, Texas Tech University, South Region Director Brenna Klauer, Colorado State University, West Region Director Jacqueline Ponce, Texas Tech University, At-Large Director Emily Rice, Kansas State University, At-Large Director Chandler Steele, Texas A&M University, At-Large Director
2018-2019	Chandler Steele, Texas A&M University President Drew Cassens, Oklahoma State University, Past President Marlee Kelley, University of Kentucky, East Region Director Matt Schulte, Iowa State University, Midwest Region Director Clay Bendele, Texas Tech University, South Region Director Blake Foraker, Colorado State University, West Region Director Erin Beyer, Texas Tech University At-Large Director Cole Perkins, Texas Tech University At-Large Director
2019-2020	Blake Foraker, Colorado State University, President Chandler Steele, Texas A&M University, Past President Jessica Brown, University of Florida, East Region Director Elizabeth Zuber, Iowa State University, Midwest Region Director Ben Mills, Texas Tech University, South Region Director Ashley Corona, Colorado State University, West Region Director Laura Yoder, Oklahoma State University, At-Large Director Bo Garcia, The Ohio State University, At-Large Director
2020-2021	Jessica Brown, University of Florida, President Blake Foraker, Colorado State University, Past President Kylie Philipps, University of Florida, East Region Director Trevor DeHaan, South Dakota State University, Midwest Region Director Kathryn Hearn, Oklahoma State University, South Region Director Tyler Thompson, Colorado State University, West Region Director Meghan Clancy, Texas Tech University, At-Large Director Morgan McKinney, University of Florida, At-Large Director
2021-2022	Kathryn Hearn, Oklahoma State University, President Jessica Brown, University of Wisconsin-Madison, Past President Nicole Wang, Ohio State University, East Region Director Sarah Bludau, Iowa State University, Midwest Region Director Shelley Curry, Texas A&M University, South Region Director Sierra Jepsen, University of Idaho, West Region Director Sebastian Hernandez, Texas Tech University, At-Large Director Samantha Barker, Texas Tech University, At-Large Director

Appendix G

Professional Awards

R.C. Pollock Award Winners

1977 R. W. Bray, University of Wisconsin

1978 D. L. Mackintosh, Kansas State University

1979 A. M. Pearson, Michigan State University

1980 L. E. Kunkle, The Ohio State University

1982 J. A. Christian, University of Georgia

1983 Z. L. Carpenter, Texas A & M University

1984 R. B. Sleeth, Armour Food Company

1985 D.M. Kinsman, University of Connecticut

1986 L. E. Walters, Oklahoma State University

1988 J. D. Kemp, University of Kentucky

1989 R. A. Merkel, Michigan State University

1990 H. B. Hedrick, University of Missouri

1991 D. H. Kropf, Kansas State University

1992 C. H. Adams, University of Nebraska

1993 V. R. Cahill, The Ohio State University

1994 V. K. Johnson, North Dakota State University

1995 R. G. Cassens, University of Wisconsin

1996 M. D. Judge, Purdue University

1997 R. G. Kauffman, University of Wisconsin

1998 H. K. Johnson, Nat'l Livestock & Meat Board

1999 H. R. Cross, IDEXX Food Safety Net Service, Inc.

2000 R.W. Mandigo, University of Nebraska

2001 G. C. Smith, Colorado State University

2002 L. L Borchert, University of Wisconsin-Madison

2003 A. W. Kotula, United States Department of Agriculture,

2004 W. G. Moody, University of Kentucky

2005 D.M. Allen, Excel Corporation (retired)

2006 D. L. Huffman, Auburn University

2007 D.B. Anderson, Colorado State University

2008 E. D. Aberle, University of Wisconsin-Madison (retired)

2009 T. R. Carr, University of Illinois

2010 G. R. Schmidt, Colorado State University (retired)

2011 R. B. Tompkin, Armour Swift-Eckrich

2012 M. C. Hunt, Kansas State University

2013 R. E. Rust, Iowa State University

2014 J. E. Sebranek, Iowa State University

2015 M. J. Riemann, Certified Angus Beef, *Retired*

2016 J. W. Wise, American Meat Science Association Retired

2017 J. D. Tatum, Colorado State University (Retired)

2018 P. T. Berg, North Dakota State University

2019 F. K. McKeith, University of Illinois

2020 J. C. Forrest, Purdue University

2021 M. E. Dikeman, Kansas State University

2022 J. W. Savell, Texas A&M University

Signal Service Award Winners

1956	S.		Bull,	University of Illinois
1956	J.	B.	Francioni, Jr.,	Louisiana State University
1956	K.	F.	Warner,	U.S. Dept. of Agriculture
1956	P.	T.	Ziegler,	The Pennsylvania State University
1957	P.	A.	Anderson,	University of Minnesota
1957	J.	L.	Hall,	Kansas State University
1957	R.	C.	Pollock,	Nat'l Live Stock & Meat Board
1958	F.	J.	Beard,	U.S. Dept. of Agriculture
1958	W.	J.	Loeffel,	University of Nebraska
1958	E.	C.	Stillwell,	Ontario Agricultural College
1959	D.	L.	Mackintosh,	Kansas State University
1960	R.	B.	Davis,	Nat'l Live Stock & Meat Board
1961	L.	E.	Kunkle,	The Ohio State University
1962	L.	J.	Bratzler,	Michigan State University
1962	R.	W.	Bray,	University of Wisconsin
1962	R.	W.	Snyder,	Texas A & M University
1963	D.	M.	Doty,	American Meat Institute
1963	B.	S.	Schweigert,	Michigan State University
1964	M.	O.	Cullen,	Nat'l Live Stock & Meat Board
1964	A.	M.	Pearson,	Michigan State University
1965	J.	W.	Cole,	University of Tennessee
1966	G.	H.	Wellington,	Cornell University
1967	C.	H.	Adams,	University of Nebraska
1968	W.	L.	Sulzbacher,	U.S. Dept. of Agriculture
1969	T.	N.	Blumer,	North Carolina State University
1969	P.	A.	Goeser,	Swift and Company
1969	L.	E.	Walters,	Oklahoma State University
1970	H.	R.	Franklin,	Nat'l Live Stock & Meat Board
1971	D.	E.	Brady,	U.S. Dept. of Agriculture
1971	Jr.,	O.	Butler,	Texas A & M University
1971	R.	B.	Sleeth,	Armour and Company
1972	G.	E.	Brissey,	Swift and Company
1972	W.	C.	Sherman,	Nat'l Live Stock & Meat Board
1973	M.	C.	Brockmann,	U.S. Army Natick Labs.
1973	R.	L.	Hiner,	U. S. Dept. of Agriculture
1974	A.	M.	Mullins,	University of Idaho
1974	C.	F.	Neumann,	Nat'l Live Stock & Meat Board
1974	F.	W.	Tauber,	Union Carbide Corporation
1975	H.	B.	Hedrick,	University of Missouri
1975	D.	M.	Kinsman,	University of Connecticut
1975	C.	E.	Murphey,	U. S. Dept. of Agriculture
1976	V.	K.	Johnson,	North Dakota State University
1976	J.	C.	Pierce,	U. S. Dept. of Agriculture
1976	R.		Staggs,	Nat'l Live Stock & Meat Board
1977	H.	N.	Draudt,	Peter Eckrich & Sons, Inc.
1977	J.	D.	Kemp,	University of Kentucky

1977	R.	A.	Merkel,	Michigan State University
1978	E.	J.	Briskey,	Campbell Inst. of Food Research
1978	J.	A.	Christian,	University of Georgia
1978	W.	E.	Tyler,	U. S. Dept. of Agriculture
1979	V.	R.	Cahill,	The Ohio State University
1979	A.	Z.	Palmer,	University of Florida
1980	Z.	L.	Carpenter,	Texas A & M University
1980	E.	A.	Kline,	Iowa State University
1981	H.	K.	Johnson,	Nat'l Live Stock & Meat Board
1981	G.	T.	King,	Texas A & M University
1982	R.	G.	Kauffman,	University of Wisconsin
1982	D.	H.	Kropf,	Kansas State University
1982	J.	R.	Stouffer,	Cornell University
1983	R.	G.	Cassens,	University of Wisconsin
1983	A.	W.	Kotula,	U. S. Dept. of Agriculture
1984	R.	A.	Field,	University of Wyoming
1984	R.	F.	Kelly,	Virginia Polytechnic Inst. & State University
1985	C.	E.	Allen,	University of Minnesota
1985	M.	D.	Judge,	Purdue University
1986	L.	L.	Borchert,	Oscar Mayer Company
1986	B.	C.	Breidenstein,	Nat'l Live Stock & Meat Board
1987	W.	C.	Stringer,	University of Missouri
1987	S.	E.	Zobrisky,	U. S. Dept. of Agriculture
1988	R.	L.	Henrickson,	Oklahoma State University
1988	D.	L.	Huffman,	Auburn University
1988	J.	H.	Ziegler,	The Pennsylvania State University
1989	J.	A.	Carpenter,	University of Georgia
1989	R.	W.	Mandigo,	University of Nebraska
1989	W.	G.	Moody,	University of Kentucky
1990	B.	B.	Marsh,	University of Wisconsin
1990	H.	D.	Naumann,	University of Missouri
1990	R.	E.	Rust,	Iowa State University
1991	E.	D.	Aberle,	University of Nebraska
1991	G.	C.	Smith,	Colorado State University
1991	G.	D.	Wilson,	American Meat Institute
1992	J.	C.	Acton,	Clemson University
1992	H.	R.	Cross,	U. S. Dept. of Agriculture
1992	R.	N.	Terrell,	Terrell Associates
1993	F.	C.	Parrish, Jr.	Iowa State University
1993	W.	C.	Schwartz,	Armour Swift-Eckrich
1994	M.	E.	Bailey,	University of Missouri
1994	M.	E.	Dikeman,	Kansas State University
1994	J.	R.	Romans,	South Dakota State University
1995	N.	G.	Marriott,	Virginia Polytechnic Inst. & State University
1995	C.	B.	Ramsey,	Texas Tech University
1995	N.	B.	Webb,	Webb Technical Group, Inc.
1996	T.	R.	Carr,	University of Illinois

1996	C.	L.	Kastner,	Kansas State University
1996	L.	E.	Orme,	Brigham Young University
1997	D.	B.	Anderson,	Elanco Animal Health
1997	A.	E.	Reynolds,	University of Georgia
1997	G.	R.	Schmidt,	Colorado State University
1998	B.	W.	Berry,	U. S. Dept. of Agriculture
1998	J.	C.	Forrest,	Purdue University
1998	M.	C.	Hunt,	Kansas State University
1999	C.	R.	Calkins,	University of Nebraska
1999	S.	H.	Richert,	Protein Technologies International
1999	R.	W.	Rogers,	Mississippi State University
2000	D.	M.	Allen,	Excel Corporation
2000	R.	B.	Tompkin,	Armour Swift-Eckrich
2000	J.	W.	Wise,	USDA Agricultural Marketing Services
2001	A.	M.	Booren,	Michigan State University
2001	J.	H.	Hodges,	American Meat Institute Foundation
2001	J.	T.	Keeton,	Texas A & M University
2002	D.	H.	Beerman,	University of Nebraska
2002	W.	J.	Costello,	South Dakota State University
2002	D.	E.	Schafer,	Kansas State University
2003	D.	R.	Buege,	University of Wisconsin-Madison
2003	W.	R.	Jones,	Auburn University
2003	D.	J.	Meisinger,	National Pork Board
2004	H.	C.	Abraham,	Abraham Consulting
2004	W.	R.	Usborne,	Caravelle Foods
2004	R.	L.	West,	University of Florida
2005	M.		Koohmaraie,	U. S. Dept. of Agriculture
2005	L.	R.	Miller,	U.S. Dept. of Agriculture
2005	J.	W.	Savell,	Texas A & M University
2006	G.	H.	Dolezal,	Cargill Meat Solutions
2006	L.	W.	Hand,	Dimension Foods
2006	J.	G.	Sebranek,	Iowa State University
2007	C.	A.	Hollingsworth,	Better Built Foods LLC
2007	F.	K.	Ray,	Outwest Meat Company
2007	J.	O.	Reagan,	National Cattleman's Beef Association
2008	L.	C.	Faustman,	University of Connecticut
2008	W.	R.	Henning,	Pennsylvania State University (retired)
2008	F.	K.	McKeith,	University of Illinois
2009	K.	W.	McMillin,	Louisiana State University
2009	T.	R.	Dutson,	Sun Gant Regional West Center
2009	P.	T.	Berg,	North Dakota State University
2010	D.	S.	Hale,	Texas A&M University
2010	J.	N.	Sofos,	Colorado State University
2010	G.	W.	Davis,	CEV Multi Media
2011	J.	D.	Tatum,	Colorado State University
2011	J.		Cordray,	Iowa State University
2011	S.	G.	Campano,	Hawkins, Inc.

2012	T.	R.	Wheeler,	USDA, ARS
2012	D.	E.	Burson,	University of Nebraska
2012	A.	L.	Milkowski,	University of Wisconsin
2013	K.	E.	Belk,	Colorado State University
2013	D.	B.	Griffin,	Texas A&M University
2013	K.	M.	Schultz-Kaster,	Farmland Foods, Inc.
2014	R.	D.	Huffman,	Maple Leaf Foods
2014	E.	J.	Huff-Lonergan,	Iowa State University
2014	S.	M.	Lonergan,	Iowa State University
2015	C.	D.	Bacon,	Tyson Foods, Inc.
2015	M.	F.	Miller,	Texas Tech University
2015	D.	L.	Seman,	Oscar Mayer/Kraft Foods
2016	E.A.	E.	Boyle,	Kansas State University
2016	C.	B.	Frye,	Burke Corporation
2016	W.	B.	Mikel,	John R. White Co.
2017	E.	P.	Berg,	North Dakota State University
2017	J.	B.	Morgan,	Performance Food Group
2017	S.	D.	Shackelford,	USDA, ARS
2018	D.	L.	Schaefer,	Cargill
2018	S.	J.	Eilert,	Cargill
2018	B.	L.	Gwartney,	USDA, Agricultural Marketing Service
2019	B.		Booren,	Grocery Manufacturers Association
2019	S.	J.	Goll,	Tyson Foods, Inc.
2019	D.		Johnson,	University of Florida
2020	P.		Clayton,	Seaboard Foods
2020	W.	Feik	Pinkerton,	Zoetis
2020	R.	K.	Miller,	Texas A&M University
2021	Y.	L.	Xiong,	University of Kentucky
2021	G.	G.	Mafi,	Oklahoma State University
2021	S.	J.	Jones,	University of Nebraska-Lincoln
2021	J.	R.	Claus,	University of Wisconsin-Madison
2021	S.K.	K.	Beals,	CTI Foods
2022	J.	K.	Apple,	Texas A&M University-Kingsville
2022	A.	Downs	Steward,	Tyson Foods, Inc.
2022	J.	A.	Scanga,	Hormel Foods Corporation
2022	L.	Graves	Delmore,	Allied Food Safety
2022	R.	J.	Delmore,	Colorado State University

Distinguished Teaching Award Winners

1965	D.	L.	Mackintosh,	Kansas State University
1966	L.	E.	Walters,	Oklahoma State University
1967	V.	R.	Cahill,	The Ohio State University
1968	J.	D.	Kemp,	University of Kentucky
1969	C.	H.	Adams,	University of Nebraska
1970	L.	E.	Kunkle,	The Ohio State University
1971	L.	J.	Bratzler,	Michigan State University
1972	R.	G.	Kauffman,	University of Wisconsin
1973	R.	F.	Kelly,	Virginia Polytechnic Institute & State University
1974	J.	R.	Stouffer,	Cornell University
1975	J.	A.	Carpenter,	University of Georgia
1976	D.	H.	Kropf,	Kansas State University
1977	E.	A.	Kline,	Iowa State University
1978	R.	F.	Plimpton,	The Ohio State University
1979	J.	W.	Carpenter,	University of Florida
1980	D.	M.	Allen,	Kansas State University
1981	D.	M.	Kinsman,	University of Connecticut
1982	R.	A.	Merkel,	Michigan State University
1983	E.	D.	Aberle,	Purdue University
1984	G.	C.	Smith,	Texas A & M University
1985	H.	B.	Hedrick,	University of Missouri
1986	L.	E.	Orme,	Brigham Young University
1987	M.	E.	Dikeman,	Kansas State University
1988	F.	C.	Parrish, Jr.,	Iowa State University
1989	M.	E.	Bailey,	University of Missouri
1990	P.	B.	Addis,	University of Minnesota
1991	G.	C.	Skelley, Jr.,	Clemson University
1992	W.	G.	Moody,	University of Kentucky
1993	W.	J.	Costello,	South Dakota State University
1994	M.	C.	Hunt,	Kansas State University
1995	J.	G.	Sebranek,	Iowa State University
1996	H.	G.	Dolezal,	Oklahoma State University
1997	J.	W.	Savell,	Texas A & M University
1998	C.	B.	Ramsey,	Texas Tech University
1999	T.	R.	Carr,	University of Illinois
2000	D.	W.	Henderson,	University of Wisconsin
2001	M.	F.	Miller,	Texas Tech University
2002	S.	J.	Jones,	University of Nebraska
2003	J.	D.	Tatum,	Colorado State University
2004	J.	A.	Unruh,	Kansas State University
2005	J.	B.	Morgan,	Oklahoma State University
2006	R.	K.	Miller,	Texas A&M University
2007	D.	M.	Wulf,	South Dakota State University
2008	S.	M.	Lonergan,	Iowa State University

2009	C.	R.	Kerth,	Auburn University
2010	E.	W.	Mills,	Pennsylvania State University
2011	J.	C.	Brooks,	Texas Tech University
2012	T.	D.	Pringle,	University of Georgia
2013	B.	R.	Wiegand,	University of Missouri
2014	D.	L.	VanOverbeke,	Oklahoma State University
2015	J.	R.	Claus,	University of Wisconsin-Madison
2016	E.	P.	Berg,	North Dakota State University
2017	M.	E.	Doumit,	University of Idaho
2018	J.	A.	Henson,	California State University-Fresno
2019	G.	G.	Mafi,	Oklahoma State University
2020	E.	Huff	Lonergan,	Iowa State University
2021	D.	R.	Woerner,	Texas Tech University
2022	C.		Carr,	University of Florida

Distinguished Research Award Winners

1965	A.	M.	Pearson,	Michigan State University
1966	E.	J.	Briskey,	University of Wisconsin
1967	R.	A.	Lawrie,	University of Nottingham
1968	J.	R.	Bendall,	Cambridge Low Temperature Research Station
1969	R.	W.	Bray,	University of Wisconsin
1970	B.	B.	Marsh,	Meat Industry Research Institute New Zealand
1971	R.	G.	Cassens,	University of Wisconsin
1972	D.	E.	Goll,	Iowa State University
1973	R.	E.	Hamm,	German Federal Institute of Meat Research
1974	M.	D.	Judge,	Purdue University
1975	R.	H.	Locker,	Meat Industry Research Institute New Zealand
1976	E.		Wierbicki,	U. S. Army Natick R & D Command
1977	A.	E.	Wasserman,	U. S. Dept. of Agriculture
1978	J.	C.	Ayres,	University of Georgia
1979	Z.	L.	Carpenter,	Texas A & M University
1980	C.	E.	Allen,	University of Minnesota
1981	M.	L.	Greaser,	University of Wisconsin
1982	G.	C.	Smith,	Texas A & M University
1983	R.	A.	Field,	University of Wisconsin
1984	R.	M.	Robson,	Iowa State University
1985	T.	R.	Dutson,	Michigan State University
1986	E.	D.	Aberle,	University of Nebraska
1987	F.	C.	Parrish, Jr.,	Iowa State University
1988	D.	R.	Campion,	University of Georgia
1989	M.	H.	Stromer,	Iowa State University
1990	H.	R.	Cross,	Texas A & M University
1991	J.	W.	Savell,	Texas A & M University
1992	A.	W.	Kotula,	U. S. Dept. of Agriculture
1993	M.		Koohmaraie,	U. S. Dept. of Agriculture
1994	J.	N.	Sofos,	Colorado State University
1995	J.	A.	Carpenter,	University of Georgia
1996	D.	H.	Beerman,	Cornell University
1997	D.	M.	Smith,	Michigan State University
1998	S.	B.	Smith,	Texas A & M University
1999	Y.	L.	Xiong,	University of Kentucky
2000	L.	C.	Faustman,	University of Connecticut
2001	J.	D.	Tatum,	Colorado State University
2002	M.	B.	Solomon,	USDA Agricultural Research Service
2003	D.	G.	Olson,	Surebeam Corporation
2004	F.	K.	McKeith,	University of Illinois
2005	J.	G.	Sebranek,	Iowa State University
2006	M.	E.	Dikeman,	Kansas State University
2007	D.	E.	Gerrard,	Purdue University
2008	M.	C.	Hunt,	Kansas State University
2009	E.	Huff	Lonergan,	Iowa State University

2010	F.		Toldra,	Instituto De Agroquimica Y Technologia de Alimentos
2011	C.	R.	Calkins,	University of Nebraska
2012	S.	M.	Lonergan,	Iowa State University
2013	T.	L.	Wheeler,	USDA Agricultural Research Service
2014	S.	D.	Shackelford,	USDA-Agricultural Research Service
2015	R.	K.	Miller,	Texas A&M University
2016	D.	D.	Johnson,	University of Florida
2017	K.	E.	Belk,	Colorado State University
2018	M.	M.	Brashears,	Texas Tech University
2019	M.	F.	Miller,	Texas Tech University
2020	B.	J.	Johnson,	Texas Tech University
2021	S.		Barbut,	University of Guelph
2022	S.	P.	Suman,	University of Kentucky

Extension/Industry Award Winners

1965	R.	E.	Rust,	Iowa State University
1966	E.	A.	Pierce,	Cornell University
1967	R.	W.	Snyder,	Texas A & M University
1968	J.	A.	Christian,	The University of Georgia
1969	J.	A.	Christian,	North Carolina State University
1970	W.	Y.	Varney,	University of Kentucky
1971	C.	O.	Schoonover,	University of Wyoming
1972	R.	L.	Reddish,	University of Florida
1973	B.	D.	vanStavern,	The Ohio State University
1974	W.	C.	Stringer,	University of Missouri
1975	F.	A.	Orts,	Texas A & M University
1976	G.	R.	Kean,	Pennsylvania State University
1977	L.	A.	Malkus,	University of Connecticut
1978	R.	J.	Epley,	University of Minnesota
1979	D.	E.	Schafer,	Kansas State University
1980	F.	W.	Tauber,	T.A.I. Consulting Co.
1981	J.	R.	Romans,	University of Illinois
1982	C.	E.	Murphey,	Texas A & M University
1983	J.	C.	Forrest,	Purdue University
1984	A.	E.	Reynolds,	University of Georgia
1985	T.	R.	Carr,	University of Illinois
1986	A.	W.	Brandt,	University of California-Davis
1987	W.	R.	Jones,	Auburn University
1988	J.	C.	Cordray,	A. c. Legg Packing Co.
1989	N.	G.	Marriott,	Virginia Polytechnic Institute & State University
1990	R.	W.	Rogers,	Mississippi State University
1991	R.	B.	Sleeth,	Armour & Company
1992	D.	R.	Buege,	University of Wisconsin
1993	D.	M.	Allen,	Excel Corporation
1994	J.	W.	Wise,	U. S. Dept. of Agriculture
1995	F.	K.	Ray,	Oklahoma State University
1996	D.	S.	Hale,	Texas A & M University
1997	A.	M.	Booren,	Michigan State University
1998	J.	H.	Hodges,	American Meat Institute
1999	W.	R.	Henning,	Pennsylvania State University
2000	F.	K.	McKeith,	University of Illinois
2001	D.	B.	Griffin,	Texas A&M University
2002	D.	E.	Burson,	University of Nebraska
2003	M.	J.	Riemann,	Certified Angus Beef
2004	T.	H.	Montgomery,	West Texas A&M University
2005	F.	D.	Dryden,	Hormel Foods Corporation
2006	W.	B.	Mikel,	Mississippi State University
2007	E.	A.	Boyle,	Kansas State University
2008	C.	L.	Knipe,	The Ohio State University
2009	R.		Huffman,	Maple Leaf Foods
2010	C.	M.	Shultz-Kaster,	Farmland Foods, Inc.

2011	C.	N.	Cutter,	The Pennsylvania State University
2012	K.	B.	Harris,	Texas A&M University
2013	A.	A.	Sosnicki,	PIC
2014	R.	C.	Johnson,	Smithfield-Farmland Corporation
2015	J.		Sindelar,	University of Wisconsin-Madison
2016	S.	J.	Eilert,	Cargill
2017	M.	M.	Brashears,	Texas Tech University
2018	D.	J.	Hanson,	North Carolina State University
2019	A.	L.	Schroeder,	Zoetis
2020	G.	K.	Rentfrow,	University of Kentucky
2021	L.	R.	Delmore,	Allied Food Safety
2022	T.	E.	Lawrence,	West Texas A&M University

Industry and Organizational Leadership

In 2020, AMSA established the Industry and Organizational Leadership Award to recognize those who have demonstrated outstanding leadership in an area related to the meat industry.

2020	G.	W.	Davis,	CEV Multimedia
2021	P.		Shand,	University of Saskatchewan
2022	B.	J.	MacFarlane,	JBS USA

Meat Processing Award Winners

1978	R.	E.	Rust,	Iowa State University
1979	C.	E.	Swift,	U.S. Dept. of Agriculture
1980	G.	R.	Schmidt,	Colorado State University
1981	R.	W.	Mandigo,	University of Nebraska
1982	R.	N.	Terrell,	Texas A & M University
1983	D.	L.	Huffman,	Auburn University
1984	J.	A.	Carpenter,	University of Georgia
1985	J.	C.	Acton,	Clemson University
1986	J.	G.	Sebranek,	Iowa State University
1987	J.	L.	Secrist,	U.S. Army Natick Labs.
1988	N.	B.	Webb,	Webb Food-Lab Inc.
1989	J.	O.	Reagan,	University of Georgia
1990	D.	G.	Olson,	Iowa State University
1991	R.	G.	Cassens,	University of Wisconsin
1992	B.	W.	Berry,	U.S. Dept. of Agriculture
1993	J.	T.	Keeton,	Texas A & M University
1994	A.	E.	Reynolds,	University of Georgia
1995	R.	B.	Tompkin,	Armour Swift-Echrich
1996	W.	C.	Schwartz,	Bil Mar Foods
1997	W.	E.	Kramlich,	Silver Creek Specialty Meats
1998	S.	H.	Richert,	Protein Technologies Int'l
1999	R.	W.	Jabaay,	Fresh Mark, Inc.
2000	S.	G.	Campano,	Central Soya Company, Inc.
2001	L.	L.	Borchert,	University of Wisconsin
2002	A.	M.	Booren,	Michigan State University
2003	C.	L.	Knipe,	The Ohio State University
2004	J.	C.	Cordray,	Iowa State University
2005	A.	L.	Milkowski,	Oscar Mayer Division of Kraft Foods
2006	W.	N.G.	Barron,	Oscar Mayer Division of Kraft Foods
2007	D.	L.	Seman,	Oscar Mayer Division of Kraft Foods
2008	J.		Butts,	Land O'Frost Inc.
2009	L.	W.	Hand,	Smithfield
2010	K.	M.	Ladwig,	Johnsonville Sausage, LLC
2011	D.	L.	Schaefer,	Cargill, Inc.

2012	M.	E.	Cassens,	Sara Lee Corporation
2013	R.		Tarte,	John Morrell & Company
2014	F.		Toldra,	Instituto De Agroquimica Y Technologia de Alimentos (CSIC), Spain
2015	B.	M.	Dismore,	Tyson Foods, Inc.
2016	W.	N.	Osburn,	Texas
2017	M.	W.	Orcutt,	Texas A&M University
2018	K.	L.	Myers,	Hormel Foods Corporation
2019	J.	W.	Lamkey,	Givaudan

Achievement Award Winners

1992	C.	M.	Amundson,	Oscar Mayer Foods Corp.
1992	M.	T.	Lesiak,	Armour Swift-Echrich
1992	R.	K.	Miller,	Texas A & M University
1993	E.	A.	Decker,	University of Kentucky
1993	S.	J.	Goll,	Oscar Mayer Foods Corp.
1993	L.	W.	Hand,	Oklahoma State University
1994	L.	C.	Faustman,	University of Connecticut
1994	C.	A.	Hollingsworth,	Bil Mar Foods
1994	M.	F.	Miller,	Texas Tech University
1995	J.	R.	Claus,	Virginia Polytechnic Institute & State University
1995	K.	L.	Kotula,	University of Delaware
1995	Y.	L.	Xiong,	University of Kentucky
1996	S.		Barbut,	University of Guelph
1996	J.	B.	Morgan,	Oklahoma State University
1996	T.	L.	Wheeler,	USDA-Agricultural Research Service
1997	C.	B.	Frye,	Burke Marketing Corp.
1997	D.	B.	Griffin,	Texas A & M University
1997	J.	L.	Johnson,	Diebel Laboratories
1998	K.	E.	Belk,	Colorado State University
1998	W.	B.	Mikel,	University of Kentucky
1998	R.		Van Laack	University of Tennessee
1999	C.	D.	Bacon,	Tyson Foods
1999	E.	A.E.	Boyle,	Kansas State University
1999	S.	D.	Shackleford,	Meat Animal Research Center
2000	J.	A.	Boles,	Montana State University
2000	D.	E.	Gerrard,	Purdue University
2000	P.	J.	Shand,	University of Saskatchewan
2001	R.	E.	Campbell,	Dial Corporation
2001	C.	N.	Cutter,	The Pennsylvania State University
2001	K.	B.	Harris,	International HACCP Alliance
2002	J.	K.	Apple,	University of Arkansas
2002	E.	J.	Huff-Lonergan,	Iowa State University
2002	S.	M.	Lonergan,	Iowa State University
2003	E.	P.	Berg,	University of Missouri
2003	J.	J.	Harris,	Southwest Meat Association
2003	F.	W.	Pohlman,	University of Arkansas
2004	R.	D.	Huffman,	American Meat Institute Foundation
2004	R.	A.	Nold,	University of Nebraska
2004	D.	M.	Wulf,	South Dakota State University
2005	C.	L.	Lorenzen,	University of Missouri
2005	W.	N.	Osburn,	Texas A & M University
2005	C.	M.	Schultz-Kaster,	Premium Standard Farms
2006	J.	C.	Brooks,	Texas Tech University
2006	M.	E.	Cassens,	Sara Lee
2006	M.	K.	McAdams,	HEB
2007	R.	J.	Delmore, Jr.,	California Polytechnic State University

2007	G.	G.	Hilton,	Oklahoma State University
2007	C.	R.	Kerth,	Auburn University
2008	D.	L.	VanOverbeke,	Oklahoma State University
2008	M.	A.	Carr,	National Cattlemen's Beef Association
2009	A.		Steward,	Tyson Foods, Inc.
2009	M.		Brashears	Texas Tech University
2009	A.	T.	Brackenridge	Cargill Meat Solutions
2010	T.	D.	Schnell,	Oscar Meyer, a Division of Kraft Foods
2010	T.	E.	Lawrence,	West Texas A&M University
2010	J.	F.	Stika,	Certified Angus Beef, LLC
2011	A.		King,	USDA-ARS, Meat Animal Research Center
2011	G.	K.	Rentfrow,	University of Kentucky
2011	W.		Schilling,	Mississippi State University
2012	S.	P.	Suman,	University of Kentucky
2012	L.	M.	Sammel,	Kraft Foods Inc./Oscar Meyer Division
2012	R.	J.	Maddock,	North Dakota State University
2013	C.	L.	Bratcher,	Auburn University
2013	T.	A.	Houser,	Kansas State University
2013	J.		Sindelar,	University of Wisconsin-Madison
2014	D.	D.	Mabry,	American Meat Science Association
2014	D.	R.	McKenna,	Tyson Foods, Inc.
2014	C.	S.	Quinlan,	Tyson Foods, Inc.
2015	T.		Knight,	H-E-B
2015	D.	R.	Woerner,	Colorado State University
2015	E.	J.	Yancey,	Tyson Foods, Inc.
2016	B.	L.	Booren,	Olsson Frank Weeda Terman Matz PC
2016	B.	E.	Wasser,	National Cattlemen’s Beef Association
2016	S.	T.	Larsen,	National Pork Board
2017	A.	C.	Dilger,	University of Illinois
2017	J.	J.	Hodgen,	Merck Animal Health
2017	K.		Underwood,	South Dakota State University
2018	P.		Joseph,	Kalsec
2018	B.		Kim,	Purdue University
2018	P.	D.	Bass,	University of Idaho
2019	C.	M.	Garner,	Tyson Foods, Inc.
2019	J.	F.	Legako,	Texas Tech University
2019	R.		Ramanathan,	Oklahoma State University
2020	T.		O’Quinn,	Kansas State University
2020	G.		Sullivan,	University of Nebraska-Lincoln
2020	D.	D.	Boler,	Topigs Norsvin
2021	T.		Scheffler,	University of Florida
2021	T.		Dinh,	Mississippi State University
2021	M.	N.	Nair,	Colorado State University
2022	K.		Compart,	Smithfield Foods
2022	B.	M.	Bohrer,	The Ohio State University
2022	A.		de Mello,	University of Nevada-Reno

Intercollegiate Meat Judging Meritorious Service Award Winners

1993	L.E.	Walters,	Oklahoma State University
1994	R.F.	Kelly,	Virginia Polytechnic Institute & State University
1995	D.H.	Kropf,	Kansas State University
1996	Standardization	Branch,	USDA Agricultural Marketing Service
1997	G.C.	Smith,	Colorado State University
1998	J.W.	Wise,	USDA, AMS, LS
1999	G.W.	Davis,	CEV Multimedia
2000	V.K.	Johnson,	North Dakota State University
2001	D.M.	Allen,	Excel Corporation
2002	F.C.	Parrish, Jr.,	Iowa State University
2003	J.W.	Bellinger,	Agri-West International, Inc.
2004	K.	Fleming,	Cargill Meat Solutions
2005	W.R.	Jones,	Auburn University
2006	T.R.	Carr,	University of Illinois
2007	P.T.	Berg,	North Dakota State University
2008	R.C.	Hines,	Tarleton State University (retired)
2009	G.H.	Dolezal,	Cargill Meat Solutions
2010	J. A.	Unruh,	Kansas State University
2011	J.B.	Morgan,	Pfizer Animal Health
2012	W. B.	Henning,	The Pennsylvania State University
2013	R.M.	Harp,	Tarleton State University
2014	M.E.	Dikeman,	Kansas State University
2015	J.	Strong,	Australian Agriculture Company
2016	M.F.	Miller,	Texas Tech University
2017	W.B.	Mikel,	John R. White Co.
2018	D.B.	Griffin,	Texas A&M University
2019	J.	Pitcock,	USDA, AMS Livestock and Poultry Program
2020	D.L.	Dowd,	USDA AMS
2021	J.W.	Savell,	Texas A&M University
2022	J.	Cannon,	Hormel Foods Corporation

International Award Winners

1989	A.J.	Bailey,	University of Bristol
1991	F.P.	Niinivaara,	University of Helsinki
1992	L.E.	Leistner,	Federal Center for Meat Research, Kulmbach, Germany
1993	R.A.	Lawrie,	University of Nottingham
1994	R.E.	Hamm,	Federal Center for Meat Research, Kulmbach, Germany
1995	D.	Lister,	CAB International
1996	D.M.	Kinsman,	University of Connecticut
1997	Z.	Duda,	Agricultural University of Wroclaw, Poland
1998	W.	Sybesma,	Institute for Animal Research
1999	R.M.	Butterfield,	University of Sydney
2000	H.W.	Ockerman,	Ohio State University
2001	R.B.	Sleeth,	Armour Food Company
2002	E.J.	Puolanne,	University of Helsinki, Viikki
2003	R.E.	Rust,	Rust Associates, Inc.
2004	P.V.	Tarrant,	Irish National Food Center
2005	R.G.	Cassens,	University of Wisconsin (emeritus)
2006	N.G.	Marriott,	Virginia Polytechnic Institute & State University
2007	K.	Honikel,	Max Rubner-Institut, Germany
2008	J.	Wood,	University of Bristol
2009	N.	Gregory,	Royal Veterinary College
2010	N.O.	Leidenz-Huert,	U.S. Meat Export Federation
2011	M.C.	Hunt,	Kansas State University
2012	H.	Swatland,	University of Guelp
2013	L.	Hoffman,	Stellenbosch University
2014	R.	Warner,	The University of Melbourne
2015	A.	Sosnicki,	PIC
2016	S.	Barbut,	University of Guelph
2017	D.	Troy,	Teagasc
2018	O.	Sorheim,	Nofima
2019	S.P.	Surendranath,	University of Kentucky
2020	T.	Grandin,	Colorado State University
2021	K.E.	Belk,	Colorado State University
2022	Y.	Xiong,	University of Kentucky

AMSA Special Recognition Award Winners

1973	H.D., DeGraff	American Meat Institute
1974	C.H., Adams	University of Nebraska
1975	W.C., Sherman	National Live Stock and Meat Board
1981	R.B., Sleeth	Armour Food Company
1983	K.R., Franklin	National Live Stock and Meat Board
1986	J.C., Filiatreau	National Live Stock and Meat Board
1990	H.K., Johnson	National Live Stock and Meat Board
1992	J.L., Huston	National Live Stock and Meat Board
1993	B.C., Breidenstein	National Live Stock and Meat Board
1997	D.H., Stroud	Channel Earth
1999	T., Buker	Missouri Farm Bureau
2002	R., Mucklow	National Meat Association
2003	R. Rust, R. Mandigo, M. Judge	Processed Meats Clinic Founders
2005	D.J., Meisinger	National Pork Board
2005	J.O., Reagan	National Cattlemen's Beef Association
2006	R.B. Sleeth & S. Rickert	2005 ICoMST Chairs
2006	C.A., Hollingsworth	Better Built Foods
2009	J. P., Boyle	American Meat Institute
2010	S. C., Olson	USDA, AMS
2011	T., Grandin	Colorado State University
2013	J.W. Wise	American Meat Science Association
2016	L. Yates	USDA-AMS, Livestock, Poultry and Seed Program
2020	D. Mabry	American Meat Science Association

Appendix H

Student Awards

Poster Research Competition

Year	Placing	Division	Name
1976	1	Graduate	G.W. Davis, Texas A&M University
1976	2	Graduate	J.L. Chant, University of Wyoming
1976	3	Graduate	A.E. Johnson, University of Kentucky
1977	1	Graduate	R.A. Bowling, Texas A&M University
1977	2	Graduate	D.H. Sigler, Texas Tech University
1977	3	Graduate	R.B. Reynolds, University of Illinois
1977	4	Graduate	H.D. Loveday, Kansas State University
1978	1	Graduate	D.G. Siegel, University of Illinois
1978	2	Graduate	C.R. Calkins, University of Tennessee
1978	3	Graduate	J.W. Halberg, Iowa State University
1978	4	Graduate	D.T. Bartholomew, North Carolina State University
1979	1	Graduate	L.W. Soloman, University of Illinois
1979	2	Graduate	J.D. Thomas, University of Missouri
1979	3	Graduate	E.W. Mills, Ohio State University
1979	4	Graduate	D.L. Seman, University of Nebraska
1980	1	Graduate	S.G. Campano, University of Connecticut
1980	2	Graduate	P. Arasu, University of Wyoming
1980	3	Graduate	C.Y. Lee, Kansas State University
1980	4	Graduate	M. Lyon, Kansas State University
1981	1	Graduate	K.W. Jones, University of Nebraska
1981	2	Graduate	L.W. Hand, Texas A&M University
1981	3	Graduate	J.C. WIlliams, University of Wyoming
1982	1	Graduate	W.D. Snyder, University of Nebraska
1982	2	Graduate	F. Coon, University of Nebraska
1982	3	Graduate	R. Johnson, South Dakota State University
1983	1	Graduate	J. Yasosky, Purdue University
1983	2	Graduate	E.A. Foegeding, University of Minnesota
1983	3	Graduate	J.S. Godber, University of Missouri
1983	4	Graduate	V.K. Fishell, Purdue University
1984	1	Graduate	M.B. Soloman, University of Florida
1984	2	Graduate	E.W. Mills, Purdue University
1984	3	Graduate	S.J. Jones, Purdue University
1984	4	Graduate	D.S. Hale, Oklahoma State University
1985	1	Graduate	W.J. Means, Colorado State University
1985	2	Graduate	M.E. Coleman, Texas A&M University

Year	Placing	Division	Name
1985	3	Graduate	F.Y. Wu, Texas A&M University
1985	4	Graduate	L.F. Miller, Purdue University
1986	1	Graduate	J.W. Lamkey, University of Nebraska
1986	2	Graduate	J.D. Turner, University of Illinois
1986	3	Graduate	L.C. St. John, Texas A&M University
1986	4	Graduate	T.L. Wheeler, Texas Tech University
1987	1	Graduate	J.L. Johnson, University of Wisconsin
1987	2	Graduate	C.Faustman, University of Wisconsin
1987	3	Graduate	K.B. Killday, University of Missouri
1987	4	Graduate	D.K. Garcia, Texas A&M University
1988	1	Graduate	J.B. Morgan, University of Nebraska
1988	2	Graduate	S.J. Goll, Kansas State University
1988	3	Graduate	R. Huffman, University of Florida
1988	4	Graduate	A. Chiavetta, Texas A&M University
1989	1	Graduate	G. Whipple, Kansas State University
1989	2	Graduate	D.R. Swartz, University of Wisconsin
1989	3	Graduate	W.F. Pinkerton, University of Florida
1989	4	Graduate	R.O. Nuckles, Michigan State University

Year	Placing	Division	Name
1990	1	MS	K.E. Warren, Kansas State University
1990	2	MS	S.M. Specht, University of Connecticut
1990	3	MS	D.M. Roth, University of Illinois
1991	1	MS	S.J. Eilert, University of Nebraska
1991	2	MS	M.J. Tsou, Clemson University
1991	3	MS	S.A. Brady, University of Kentucky
1992	1	MS	W.N. Osburn, Texas A&M University
1992	2	MS	D.K. Shipp, Oklahoma State University
1992	3	MS	S. Kartika, Clemson University
1993	1	MS	L.R. Graves, University of Nebraska
1993	2	MS	T.L. Frederick, Texas Tech University
1993	3	MS	K.A. Newkirk, Oklahoma State University
1994	1	MS	T.A. Whitman, Purdue University
1994	2	MS	K.H. Hakkarainen, University of Connecticut
1994	3	MS	L.L. Fenton, Oklahoma State University
1995	1	MS	C.M. Calhoun, University of Nebraska
1995	2	MS	A. Orta-Ramirez, Michigan State University
1995	3	MS	C.R. Kerth, Texas Tech University
1996	1	MS	B.K. Quandt, University of Nebraska
1996	2	MS	L.L. Moore, Texas A&M University
1996	3	MS	F.M. O'Mara, University of Georgia
1997	1	MS	M.L. Boehm, University of Arizona
1997	2	MS	B. O'Rourke, University of Nebraska
1997	3	MS	J.A. Scanga, Colorado State University
1998	1	MS	B.T. Rodriguez, Utah State University
1998	2	MS	M.L. Sicker, Virginia Tech
1998	3	MS	Q. Sun, University of Connecticut
1999	1	MS	A.T. Waylan, Kansas State University
1999	2	MS	N.C. Jerez, University of Nebraska
1999	3	MS	P. Prachaiyo, University of Massachusetts
2000	1	MS	
2000	2	MS	
2000	3	MS	Deb Roeber, Colorado State University
2001	1	MS	
2001	2	MS	
2001	3	MS	
2002	1	MS	
2002	2	MS	Jana Norman, University of Missouri
2002	3	MS	Terry Houser, Iowa State University

Year	Placing	Division	Name
2003	1	MS	
2003	2	MS	
2003	3	MS	
2004	1	MS	Loree Branham, Angelo State University
2004	2	MS	
2004	3	MS	
2005	1	MS	
2005	2	MS	
2005	3	MS	Jeannine Grobbel, Kansas State University
2006	1	MS	Chancie Moore, Colorado State University
2006	2	MS	Joshua Shook, University of Georgia
2006	3	MS	Clay Talton, University of Georgia
2007	1	MS	Amanda (Rigdon) Everts, South Dakota State University
2007	2	MS	Ranjith Ramanathan, University of Connecticut
2007	3	MS	Mitch Bowling, Colorado State University
2008	1	MS	Christine Leick, University of Illinois
2008	2	MS	Teresa Aldredge, Texas A&M University
2008	3	MS	Lauren Luque, Kansas State University
2009	1	MS	Dustin Mohrhauser, South Dakota State University
2009	2	MS	Ashley Lepper, North Dakota State University
2009	3	MS	Fran Korthaus, University of Kentucky
2010	1	MS	Hunter Galloway, West Texas A&M University
2010	2	MS	Bradley Lowe, University of Georgia
2010	3	MS	Sarah Wells, South Dakota State University
2011	1	MS	Mahesh Narayanan Nair, University of Kentucky
2011	2	MS	Jackie Popowski, University of Minnesota
2011	3	MS	Megan McGough, University of Wisconsin
2012	1	MS	Austin Voyles, West Texas A&M University
2012	2	MS	Justine Hosch, University of Nebraska-Lincoln
2012	3	MS	Melissa Miller, University of Georgia
2013	1	MS	Michael Colle, University of Idaho
2013	2	MS	Johnathan Broady, Auburn University
2013	3	MS	Alexandra Christiansen, Kansas State University
2014	1	MS	Kristin Adams, Iowa State University
2014	2	MS	Megan Webb, Colorado State University
2014	3	MS	Troy Tarpley, Angelo State University

Year	Placing	Division	Name
1990	1	PhD	P.J. Shand, Colorado State University
1990	2	PhD	C.D. Bacon, University of Tennessee
1990	3	PhD	P.B. Kenney, Kansas State University
1991	1	PhD	D.E. Gerrard, Purdue University
1991	2	PhD	S.W. Neel, University of Georgia
1991	3	PhD	V.M. Ghorpade, Utah State University
1992	1	PhD	K.E. Belk, Texas A&M University
1992	2	PhD	B.L. Gwartney, University of Nebraska
1992	3	PhD	M.K. Andersen, University of Wyoming
1993	1	PhD	C-Y. Ho, Iowa State University
1993	2	PhD	P.W. Hall, Jr., Clemson University
1993	3	PhD	
1994	1	PhD	S.J. Eilert, University of Nebraska
1994	2	PhD	Y. Lan, University of Illinois
1994	3	PhD	
1995	1	PhD	A.B. Smyth, Michigan State University
1995	2	PhD	C.A. Morris, Texas A&M University
1995	3	PhD	Z. DeFreitas, Iowa State University
1996	1	PhD	A.L. Nutsch, Kansas State University
1996	2	PhD	E.P. Berg, Purdue University
1996	3	PhD	
1997	1	PhD	C.L. Lorenzen, Texas A&M University
1997	2	PhD	C. Calhoun, University of Nebraska
1997	3	PhD	L. Graves Delmore, Colorado State University
1998	1	PhD	T.D. Schnell, University of Nebraska
1998	2	PhD	K.E. Nanke, Iowa State University
1998	3	PhD	K.B. Chin, Texas A&M University
1999	1	PhD	J.A. Scanga, Colorado State University
1999	2	PhD	C.R. Kerth, Texas Tech University
1999	3	PhD	T. Ariyapitipun, University of Missouri
2000	1	PhD	
2000	2	PhD	
2000	3	PhD	
2001	1	PhD	
2001	2	PhD	
2001	3	PhD	
2002	1	PhD	
2002	2	PhD	
2002	3	PhD	C.D. Gilbert, Texas A&M University

Year	Placing	Division	Name
2003	1	PhD	
2003	2	PhD	
2003	3	PhD	
2004	1	PhD	
2004	2	PhD	
2004	3	PhD	
2005	1	PhD	
2005	2	PhD	
2005	3	PhD	Surendranath Suman, University of Connecticut
2006	1	PhD	Amanda Weaver, Purdue University
2006	2	PhD	Scott Updike, The Ohio State University
2006	3	PhD	Jennie Hodgen, University of Nebraska
2007	1	PhD	Keith Underwood, University of Wyoming
2007	2	PhD	
2007	3	PhD	Phil Rincker, University of Illinois
2008	1	PhD	Betsy Booren, Texas A&M University
2008	2	PhD	Tanner Machado, South Dakota State University
2008	3	PhD	Lee Ann Kinman, Oklahoma State University
2009	1	PhD	Samira Dadgar, University of Saskatchewa
2009	2	PhD	Mark Anderson, Iowa State University
2009	3	PhD	Poulson Joseph, University of Kentucky
2010	1	PhD	Dustin Boler, University of Illinois
2010	2	PhD	Anand Mohan, University of Connecticut
2010	3	PhD	Ranjith Ramanathan, Kansas State University
2011	1	PhD	Melissa Weber, Kansas State University
2011	2	PhD	Tracey Jennings, South Dakota State University
2011	3	PhD	Wenjie Liu, North Carolina State University
2012	1	PhD	Sara Gragg, Texas Tech University
2012	2	PhD	Lasika Senaratne-Lenagala, University of Nebraska-Lincoln
2012	3	PhD	Dale Perez, University of Wisconsin-Madison
2013	1	PhD	Anna Taylor, South Dakota State University
2013	2	PhD	Amanda King, University of Wisconsin
2013	3	PhD	Bradley Lowe, University of Illinois
2014	1	PhD	Erin Harris, University of Minnesota
2014	2	PhD	Nantawat Tatiyaborworntham, University of Wisconsin-Madison
2014	3	PhD	Michael Chao, University of Nebraska-Lincoln

Year	Placing	Division	Name
2015	1	UG	Iris Grossman, University of Illinois at Champaign-Urbana
2015	2	UG	Kendra Wills, Oklahoma State University
2015	3	UG	Traci Cramer, Purdue University
2016	1	UG	Derico Setyabrata, Purdue University
2016	2	UG	Emily Krage, Fresno State University
2016	3	UG	Nicolas Herrera, University of Nebraska
2017	1	UG	Yufan Chao, Purdue University
2017	2	UG	Erin Bryan, University of Illinois
2017	3	UG	Kayla Barkley, Penn State
2018	1	UG	Jacob Tuell, Purdue University
2018	2	UG	Maggie Justice, Clemson University
2018	3	UG	Erica Shebs, University of Nevada, Reno
2019	1	UG	Conrad Schelkopf, Colorado State University
2019	2	UG	Erin Will, Purdue University
2019	3	UG	Amelia Welter, Kansas State University
2020	1	UG	Chloe Gingerich, University of Florida
2020	2	UG	Madelyn Scott, Oklahoma State University
2020	3	UG	Mandy Lawson, Oklahoma State University
2020	1	UG	Heather Hunt, University of Nebraska– Lincoln
2020	2	UG	Danielle Shirey, University of Illinois
2020	3	UG	Shelley Curry, Texas A&M University
2020	1	UG	Chandler Sarchet, Texas Tech University
2020	2	UG	Anna Wagner, Purdue University
2020	3	UG	Elaine LaRoche, Kansas State University
2021	1	UG	Makenna Hawkins-Peevey, Texas A&M University
2021	2	UG	Ian Lovell, University of Wyoming
2021	3	UG	Madelyn Scott, Oklahoma State University

Year	Placing	Division	Name	
2015	1	MS	Jessie McClellan, Utah State University	
2015	2	MS	Jessica Baggerman, Texas Tech University	
2015	3	MS	Matthew Colle, University of Idaho	
2016	1	MS	Kelsey Carlson, Iowa State University	
2016	2	MS	Megan Nelson, University of Minnesota	
2016	3	MS	Macc Rigdon, University of Georgia	
2017	1	MS	Faith Rasmussen, University of Nebraska	
2017	2	MS	Kacie Salove, University of Idaho	
2017	3	MS	Kylee Werland, Angelo State University	
2018	1	MS	Danika Miller, Iowa State University	
2018	2	MS	Elizabeth Price, University of Wisconsin	
2018	3	MS	Xinyi Wei, University of Saskatchewan	
2019	1	MS	Sebastian Chalupa-Krebzdak, University of Guelph	
2019	2	MS	Hannah Price, University of Illinois	
2019	3	MS	Toni Duarte, University of California- Davis	
2020	1	MS	Mariah Nondorf, Purdue University	Muscle Biology/Fresh Meat Quality
2020	2	MS	Tanya Weber, University of Idaho	Muscle Biology/Fresh Meat Quality
2020	3	MS	Elizabeth Zuber, Iowa State University	Muscle Biology/Fresh Meat Quality
2020	1	MS	Wan Jun Wu, Kansas State University	Processing/Technology/Food Safety and Preservation
2020	2	MS	Katherine Modrow, Texas A&M University	Processing/Technology/Food Safety and Preservation
2020	3	MS	Elizabeth West, University of Guelph	Processing/Technology/Food Safety and Preservation
2020	1	MS	Lydia Hite, South Dakota State University	Sustainability/Production/Food Waste
2020	2	MS	Tylo Kirkpatrick, West Texas A&M University	Sustainability/Production/Food Waste
2020	3	MS	Sierra Pillmore, West Texas A&M University	Sustainability/Production/Food Waste
2021	1	MS	Yifei Wang, University of Kentucky	
2021	2	MS	Logan Johnson, Iowa State University	
2021	3	MS	Kathryn Hearn, Oklahoma State University	

Year	Placing	Division	Name	
2015	1	PhD	Travis Hoffman, Colorado State University	
2015	2	PhD	Nikki Neethling, Stellenbosch University	
2015	3	PhD	Jessie Vipham, Texas Tech University	
2016	1	PhD	Nathan Tapp, Texas Tech University	
2016	2	PhD	Soladoye Olugbenga Philip, University of Saskatchewan	
2016	3	PhD	Katherine Domenech-Perez, University of Nebraska	
2017	1	PhD	Megan Webb, South Dakota State University	
2017	2	PhD	Andrea English, Texas Tech University	
2017	3	PhD	Mo Jia, Colorado State University	
2018	1	PhD	Maggie Weinroth, Colorado State University	
2018	2	PhD	Macc Rigdon, University of Georgia	
2018	3	PhD	Derico Setyabrata, Purdue University	
2019	1	PhD	Aeriel Belk, Colorado State University	
2019	2	PhD	Hillary Martinez, Texas A&M University	
2019	3	PhD	Juan P. Caldas-Cueva, University of Arkansas	
2020	1	PhD	Taylor Krause, University of Georgia	Muscle Biology/Fresh Meat Quality
2020	2	PhD	Matt Schulte, Iowa State University	Muscle Biology/Fresh Meat Quality
2020	3	PhD	Frank Kiyimba, Oklahoma State University	Muscle Biology/Fresh Meat Quality
2020	1	PhD	Aeriel Belk, Colorado State University	Processing/Technology/Food Safety and Preservation
2020	2	PhD	Jacob Tuell, Purdue University	Processing/Technology/Food Safety and Preservation
2020	3	PhD	Giannina Brugnini, Universidad de la Republica	Processing/Technology/Food Safety and Preservation

2020	1	PhD	Christina Bakker, South Dakota State University	Sustainability/Production/Food Waste
2020	2	PhD	Nick Hardcastle, Texas Tech University	Sustainability/Production/Food Waste
2020	3	PhD	Francisco Najar, Kansas State University	Sustainability/Production/Food Waste
2021	1	PhD	Jacob R. Tuell, Purdue University	
2021	2	PhD	Natalie Acosta-Castellanos, North Dakota State University	
2021	3	PhD	Jessica Lancaster, University of Idaho	

Outstanding Undergraduate Award

Year	Name	University
1977	S. Newman	Texas A&M University
1977	S. Francis	Kansas State University
1978	G. Manning	Oklahoma State University
1978	L. Magnum	University of Tennessee
1978	S.J. McKee	University of Illinois
1978	C. Knipe	Ohio State University
1979	S. Shimmin	University of Illinois
1979	P. Olson	Kansas State University
1979	J. Wagner	Michigan State University
1979	J.A. Haston	University of Tennessee
1980	L. Thiel	University of Illinois
1980	K. Losecke	University of Nebraska
1980	S. Watson	University of Tennessee
1980	R. Shuey	Oklahoma State University
1980	M. Couture	Michigan State University
1981	D.J. Nordby	North Dakota State University
1981	T.J. Cech	University of Nebraska
1981	L.M. Skoch	Kansas State University
1981	H.A. Recio	Texas A&M University
1982	P. Bernthal	Michigan State University
1982	J. Downey	University of Illinois
1982	G. Highfill	Oklahoma State University
1982	S. Simmons	South Dakota State University
1983	R. Beranek	University of Nebraska
1983	A. Conley	Kansas State University
1983	D. DeVol	University of Illinois
1983	D. Skjaerlund	Michigan State University
1983	T. Wheeler	Texas Tech University
1984	S.L. Jones	University of Illinois
1984	T.M. Esposito	University of Connecticut
1984	M.G. Phillips	University of Tennessee
1984	K.L. Bacon	University of Wisconsin
1985	D.K. Jones	West Texas State University
1985	K.C. DeHaan	University of Illinois
1985	S.C. Edwards	University of Tennessee
1985	D.K. Dorough	Auburn University

Year	Name	University
1985	K.W. Gronewald	Texas Tech University
1986	C.A. Terry	Texas A&M University
1986	T.S. Muller	South Dakota State University
1986	V.S. Scranton	University of Illinois
1986	L.J. Backus	University of Tennessee
1986	V.L. Baehler	Panhandle State University
1987	K.E. Warren	University of Tennessee
1987	J.K. Apple	Oklahoma State University
1987	S.D. Shakelford	University of Georgia
1987	L. Marksberry	University of Kentucky
1987	K.L. Wolff	South Dakota State University
1988	T.H. Powell	University of Tennessee
1988	R.E. Whiteway	University of Georgia
1988	J.S. Cherry	Michigan State University
1988	P.K. Crome	University of Illinois
1988	R.E. Mikesell	Pennsylvania State University
1989	S.J. Eilert	Kansas State University
1989	J.L. Hensley	Oklahoma State University
1989	T.L. Kendall	University of Georgia
1989	S.A. Brady	University of Kentucky
1989	D.M. Wulf	South Dakota State University
1990	J.E. Cannon	University of Illinois
1990	D.W. Grams	Texas A&M University
1990	J.A. Kirschner	Oklahoma State University
1990	C.L. Nick	Kansas State University
1990	D.R. Patterson	University of Wisconsin
1991	G.G. Ruehle	Oklahoma State University
1991	S.L. Jones	University of Tennessee
1991	S.K. Sanders	Texas A&M University
1991	C.A. Morris	Iowa State University
1991	J.L. Bartlett	Kansas State University
1992	S.D. Harris	Texas A&M University
1992	J.E. Martin	University of Tennessee
1992	M.B. Rasmussen	South Dakota State University
1992	S.R. Steuwe	Kansas State University
1992	D. Taylor	Texas Tech University
1993	J.C. Bogdahn	Oklahoma State University

Year	Name	University
1993	J.F. Stika	Kansas State University
1993	S.Y. Gilbert	Texas Tech University
1993	J.S. Oman	Texas A&M University
1993	B.M. Gorman	University of Illinois
1994	B.A. Gardner	Oklahoma State University
1994	L.D. Llewellyn	Kansas State University
1994	G.G. Hilton	Texas Tech University
1994	K.J. Goodson	Texas A&M University
1994	K.B. Guffey	West Texas State University
Due to ICoMST, no awards were given in 1995		
1996	J.L. Dunn	Kansas State University
1996	J.J. Engel	University of Nebraska
1996	B.L. Forster	Colorado State University
1996	M.E. Keller	University of Tennessee
1996	L.K. Locke	Texas Tech University
1996	R.A. Ross	University of Illinois
1997	J.L. Wahrmund	Texas A&M University
1997	H.D. Alderson II	Texas Tech University
1997	A.T. Waylan	Kansas State University
1997	C.D. George	Oklahoma State University
1997	D.R. McKenna	Iowa State University
1998	K.M. Killinger	Kansas State University
1998	B.C. Mumford	Utah State University
1998	A.R. Lehmann	Texas Tech University
1998	L.S. Vander Wal	South Dakota State University
1999	G.H. Locke	Texas Tech University
1999	R. Steiner	Oklahoma State University
1999	D.A. King	Texas A&M University
1999	J.J. Sindelar	University of Nebraska
1999	R.A. Mancini, Jr.	University of Connecticut
2000	L.J. Vaske	Iowa State University
2000	R.C. Person	Texas A&M University
2000	M.J. Ritter	Michigan State University
2001	Joseph Baumert	University of Nebraska
2001	Tara Tschirhart	Texas A&M University
2001	Angela Reicks	Iowa State University
2001	Jeannine Grobble	Michigan State University

Year	Name	University
2001	Lori Dawn Rothermel	Oklahoma State University
2002	Tracy Copenhafer	Michigan State University
2002	John Ellebracht	Texas A&M University
2002	Wendy Palmore	Texas Tech University
2002	Rachel Postin	University of Georgia
2002	Roxanne Wagner	South Dakota State University
2002	Dale Woerner	Texas Tech University
2003	John Kellermeier	Texas Tech University
2004	Suzanne Ryan	Kansas State University
2004	Carrie Adams	Texas A&M University
2004	Chancie Moore	Texas A&M University
2004	Michelle Gorhum	Texas Tech University
2004	Lauren Grimes	Texas Tech University
2004	Joseph Emenheiser	Oklahoma State University
2004	Donald Moss	University of Nebraska
2004	Jennifer Skien	University of Illinois
2005	Andrew Everts	South Dakota State University
2005	Gary Sullivan	Iowa State University
2005	Corri Rekow	University of Wyoming
2005	Sidney Cunningham	Oklahoma State University
2005	Amanda Rigdon Everts	South Dakota State University
2006	Jessica Clay	Texas Tech University
2006	Adam Krause	University of Nebraska
2006	Megan Laster	Texas A&M University
2006	Heather Rogers	Angelo State University
2006	Landi Woolley	Texas Tech University
2007	Travis O'Quinn	Texas Tech University
2007	Jessica Igo	Texas A&M University
2007	Amber Harris	Texas Tech University
2007	Dustin Mohrhauser	South Dakota State University
2007	Brooke McClure	University of Illinois
2007	Darci Owens	Angelo State University
2007	Ashley Sutterfield	Oklahoma State University
2007	Casey Maxwell	Oklahoma State University
2007	Tina Krafft	Kansas State University
2007	Stephanie Bradley	Texas A&M University

Year	Name	University
2007	Matt Sellars	Texas Tech University, Honorable Mention
2007	Jennifer Lacey	Colorado State University, Honorable Mention
2008	B.M. Gerlach	University of Nebraska
2008	S.L. DeGeer	Kansas State University
2008	D.L. Clark	University of Illinois
2008	M.D. Mitchell	Texas Tech University
2008	A.M. King	Iowa State University
2009	S. Ward	Texas Tech University
2009	R. Tokach	Kansas State University
2009	P. Humphrey	University of Wisconsin
2009	K. Baker	Kansas State University
2009	M. Lambrecht	South Dakota State University
2009	M.M. McGough	University of Wisconsin
2009	P. Daniels	Texas Tech University
2009	C. Highfill	Oklahoma State University
2009	C. Frye	Burke Corporation
2009	J. Cannon	Angelo State University
2013	A. Collins	Oklahoma State University
2013	T. Adams	Texas Tech University
2013	E. Blom	South Dakota State University
2013	T. Brooks	Texas A&M University
2013	S. Corkran	Auburn University
2013	B. Harsh	Ohio State University
2013	B. Hutto	Texas Tech University
2013	E. Miller	University of Nebraska
2014	Kelsey Carlson	Iowa State University
2014	Christina Fehrman	South Dakota State University
2014	Kourtney Keck	Auburn University
2014	Morgan Marie Neilson	Oklahoma State University
2014	Heather Rode	Texas Tech University
2014	Kelly R. Vierck	Oklahoma State University
2014	Hope Voegele	Texas A&M University
2014	Austin Langemeier	Texas Tech University-Honorable Mention
2014	Jessie Hoffman	Texas A&M University-Honorable Mention

Year	Name	University
2014	Taylor Wolfer	University of Illinois
2015	Allison Hobson	Kansas State University
2015	Brandon Klehm	Ohio State University
2015	Austin Langemerier	Texas Tech University
2015	Amanda Outhouse	Iowa State University
2015	Shannon White	Oklahoma State University
2016	Emily Bedwell	Kansas State University
2016	Erin Beyer	Texas Tech University
2016	Darby Gonzales	Texas Tech University
2016	Brian Patterson	Iowa State University
2016	Faith Rasmussen	Kansas State University
2017	Michael Cropp	Kansas State University
2017	Blake Foraker	Kansas State University
2017	Cole Perkins	Texas Tech University
2017	Jennifer Posthuma	University of Nebraska
2017	Chandler Steele	Oklahoma State University
2018	Abby Bechtold	Oklahoma State University
2018	Dean Chapman	Texas Tech University
2018	Tommy Fletcher	Texas Tech University
2018	Ben Mills	Texas Tech University
2018	Beth Zuber	Iowa State University
2019	Sam Davis	Kansas State University
2019	Katelyn Gaffield	University of Illinois
2019	Keayla Harr	Kansas State University
2019	Kathryn Hearn	Oklahoma State University
2019	Charley Rayfield	Oklahoma State University
2020	Megan Eckhardt	Texas Tech University
2020	Becca Grimes	West Texas A&M University
2020	Katie Lybarger	Kansas State University
2020	Conner McKinzie	Texas Tech University
2020	Chandler Sarchetis	Texas Tech University
2020	Colton Smith	Texas Tech University
2020	Hannah Williams	Kansas State University
2021	Sarah Bludau	Iowa State University
2021	Lindsey Decker	Kansas State University
2021	Heather Hunt	University of Nebraska-Lincoln
2021	Shae Suttle	Texas Tech University

Year	Name	University
2021	Abby Schiefelbein	Kansas State University
2022	Jake Bagby	Texas Tech University
2022	Elizabeth Chmielewski	University of Florida
2022	Lauren Lee	Texas A&M University
2022	Zachary McDonough	West Texas A&M University
2022	Kaitlyn Roley	University of Illinois
2022	Madelyn Scott	Oklahoma State University

Quiz Bowl

Year	Placing	University
2002	1	Texas A&M University
2003	1	Texas Tech University
2004	1	Texas A&M University
2005	1	Texas Tech University
2006	1	Angelo State University
2007	1	Texas Tech University
2008	1	Mississippi State University
2009	1	Texas Tech University
2010	1	Texas Tech University
2011	1	Texas A&M University
2012	1	Colorado State University
2013	1	Texas Tech University
2014	1	Texas Tech University
2014	2	Colorado State University
2015	1	Angelo State University
2015	2	Texas Tech University
2016	1	Texas Tech University
2016	2	Colorado State University
2017	1	Iowa State University
2018	1	Colorado State University
2019	1	Texas Tech University Black
2019	2	Texas Tech University Red
2020	1	West Texas A&M University
2020	2	Texas A&M University
2021	1	Texas Tech University
2021	2	Texas A&M University

Taste of RMC

Year	Placing	University	Team Name/Product
2006		The Ohio State University	First place pork division with Mexican Cannonballs
2006		Iowa State University	Second place pork division with Strami
2006		Texas Tech Black	First place beef division with Armadillo Eggs
2006		Texas A&M University	Second place beef division with Southwestern Sizzlers
2006	PC	Texas Tech University	
2007		University of Illinois	
2008		University of Illinois	Amazin' Asian BBQ Egg Roll
2009		Oklahoma State University	Baja Chimipopper
2010		North Carolina State University	North Carolina Style Barbecue Pork
2011		Colorado State University	Breakfast Jammers
2012		Pennsylvania State University	Chao Tom
2013	1	University of Georgia	Chicken and Waffles
2013	PC	Colorado State University	Ram-a-Fired Bacon
2014	1	Angelo State University	The Southwest Change-up
2014	PC	University of Florida	Alberts Growler Bites
2015	1	Colorado State University	Green and Gold Chili
2015	PC	Angelo State University	Aunt Emma's Italian Muffin
2016	1	Tarleton State University	Great Plains Bison Bar
2016	2	Colorado State University	Mo Mo's Mongolian Beef
2016	PC	Oklahoma State University	Baquito
2017	1	Texas Tech University	Texas Tech Kebab
2017	2	Colorado State University	

2017	PC	Colorado State University	
2018		No Taste of RMC	Hard to source venues to collect shipments of product and F/B Vendors unable to serve product they did not make or get from food distr.
2019	PC	Iowa State University	Iowa State Beef Brunchies
2019	1	Iowa State University	Iowa State Beef Brunchies
2019	2	Cal Poly	Cal Poly Beef Snack Sticks and Gouda Cheese
2020		No Taste of RMC	

***PC = People's Choice**

T-Shirt Auction

Year	T-Shirt Auction Winner	People's Choice Award
2008	Texas Tech University	Texas Tech University
2009	Oklahoma State University	Texas A&M University
2010	Colorado State University	Oklahoma State University
2011	Colorado State University	University of Arkansas
2012	Oklahoma State University	Texas Tech University
2013	Oklahoma State University	Oklahoma State University
2014	Iowa State University	Angelo State University
2015	Iowa State University	South Dakota State University
2016	Iowa State University	Colorado State University
2017	Iowa State University	Colorado State University
2018	Iowa State University	University of Florida
2019	Iowa State University	University of Florida
2020	Texas A&M University	Unknown
2021	Texas Tech University	Iowa State University

Iron Chef

Year	Placing	Team Name	Product Name	Students
2008	1		"Cowboy Twist"	Gabriel Eric Chmielewski, Texas A&M University Joseph Bullard, California State University-Fresno Laici Rae Wedel, University of Arkansas Shannon M. Bennett, Texas A&M University Kaitlyn M. McClelland, University of Kentucky
2009	1		Carribon Chicken	Unknown
2010	1		Carne Goatsada	Curtis Pittman, Colorado State University C. Brent Welling, Oklahoma State University Haley Deitzel, Texas A&M University Ariel Winegar, California Polytechnic State University Michael Truesdell, Oklahoma State University Tracy Jennings, South Dakota State University Leo Batot, Angelo State University
2011	1		Turkey Jerk	Tabitha Welch, Auburn State University Crystal Water, Fresno State University McKenzie Clifton, Oklahoma State University, Tracy Jennings, South Dakota State University Miles Guelker, Texas A&M University Ryan Fairbairn, The Pennsylvania State University Nicole Browne, University of Arkansas
2012	1		Chipotle Blueberry Brat	Melissa Foucar, California Polytechnic State University Kayla Wood, California State University-Fresno Tricia Harlan, Oklahoma State University Gatlan Gray, Texas A&M University Christina Fehrman, South Dakota State University Mitchell Peters, University of Arkansas Lauryn Vanderwerff, University of Wisconsin
2013	1		Bama Slammas	Jarrod Bumsted, South Dakota State University Kayla Foster, University of Wyoming Blake Hesteande, Texas A&M University Dilpreet Kaur, California State University-Fresno Kaleigh Kerns, University of Arkansas Krystal Montemayor, Texas A&M University Kingsville Megan Myers, Iowa State University Carlie Perham, Colorado State University Henry Ruiz, Texas Tech University Jing Zhao, University of Wisconsin

2014	1	Kool-Aid	Homestyle with a Twist	Hunter Brietzke, Angelo State University Gustavo Faz, Angelo State University Chance Reeder, California State University-Fresno Amanda Outhouse, Iowa State University McKenna Powell, Iowa State University Kelly Vierck, Oklahoma State University Kaleigh Kerns, South Dakota State University Hillary Henderson, Texas A&M University Bo Hutto, Texas Tech University Zachary Krug, University of Arkansas Katy Shircliff, University of Missouri
2015	1	Orville Redenbacher		Blythe Beavers, Texas A&M University Kelsey Carlson, Iowa State University Jordan Juckel, University of Minnesota Zachary Krug, University of Arkansas Reagan Mitchell, Angelo State University Chance Reeder, Fresno State University Maggie Shane, University of Missouri Joanna Swenson, Colorado State University Carla Weissend, Auburn University
2016	1	Tongue Twisters	Beef Cuts: Beef Cheeks, Sweetbreads, or Tongue	Courtney Pollard, Angelo State University Ivey Wise, Auburn University Maggie Weinroth, Colorado State University Paige Wysong, Fresno State University Natalia Arango, Louisiana State University Colton Kersey, Oklahoma State University Nicolas Bland, Purdue University Stormy Joplin, Texas A&M University Clay Braden, Texas Tech University Brittany Stettmeier, University of Arkansas
2016	2	Organ Trail	Beef Cuts: Beef Cheeks, Sweetbreads, or Tongue	Reagan Mitchell, Angelo State University Shannon Wilkerson, Auburn University Carla Weissend, Colorado State University Annika Paris, Fresno State University Michael Cropp, Kansas State University Sage Edelkind, Louisiana State University Katelyn Brennecke, Oklahoma State University Daniel Gongwer, Purdue University Hannah Laird, Texas A&M University Sean Morrow, Texas Tech University Taylor Langford, Oklahoma State University

2017	1	Team 3	Beef Culottes and Hominy	Brianna Britton, Colorado State University Griffin Dorr, Louisiana State University Carl Frame, Iowa State University Kassidy Hakemack, Angelo State University Megan Jass, University of Wisconsin Hannah Laird, Texas A&M University Russell McMinn, University of Wisconsin Cassandra Pena, Texas A&M University Elaine Richardson, University of Illinois Tara Simon, Iowa State University Jacob Tuell, Purdue University Mark Zoeller, Angelo State University
2018	PC	The Machine	Smoked Turkey Breast and Beef Ball Tip Roast	Rosemaria Meza, California State University-Fresno Rachel Wynn, Iowa State University Morgan Denzer, Oklahoma State University Michaella Fevold, North Dakota State University Mariah Nondorf, Purdue University Kassidy Hakemack, Angelo State University Jennifer Perez, California State University-Chico Clay Newton, South Dakota State University Callan Lichtenwatler, University of Arkansas Ben Mills, Texas Tech University Andi Inmon, Colorado State University
2018	1	Sweet and Spicy	Smoked Turkey Breast and Beef Ball Tip Roast	Avery Smith, Auburn University Lydia Hite, South Dakota State University Mac Cassas, Colorado State University Macye Boyd, Angelo State University Madison Hardin, California State University-Fresno Marisol Escamilla, University of Arkansas Paige Smith, Texas A&M University Xinyi Wei, University of Guelph Zack Peppmeier, Iowa State University Paulette Cairns, Virginia Polytechnic Institute & State University
2018	2	Meat Sweats	Smoked Turkey Breast and Beef Ball Tip Roast	Alexis Carroll, Angelo State University Arquimides Reyes, Colorado State University Chaoyang Li, Louisiana State University Dylan Tucker, Texas A&M University Megan Knutson, South Dakota State University Megan Leitner, University of Florida Morgan Rosenberger, Iowa State University Taylor Hardin, California State University-Fresno Thomas Glascock, University of Arkansas Wenxin Xiang, University of Saskatchewan Yufei Guo, Purdue University Eric Hamilton, Texas A&M University

2019	PC			Morgan Denzer, Oklahoma State University Karli Durst, Iowa State University Morgan Gravely, University of Georgia Kallie Knott, Purdue University Jason Langlie, University of Minnesota Ben Mills, Texas Tech University Megan Terrazas, California State University-Fresno Sarah Vollmert, California State University-Chico Shelby Watts, California Polytechnic State University Mark Zoeller, Angelo State University Beth Zuber, Iowa State University
2019	1			Georgia Androy, Iowa State University Kaitlin Chauvin, Louisiana State University Allison Conchiglia, University of Florida Sarah Dreyer, California Polytechnic State University Joe Metz, University of Illinois Elizabeth Mitzel, South Dakota State University Amanda Prentice, California State University-Chico Hugo Rodriguez-Ramire, California State University-Fresno Tate Schwartz, Angelo State University Andrea Tan, Iowa State University Amber Wright, Tarleton State University
2019	2			Lindsay Biscoe, Oklahoma State University Joe Bryson, Iowa State University Chloe Gingerich, University of Florida Allison Howell, Oklahoma State University Mariah Huge, Purdue University Clay Newton, South Dakota State University Amy Sandschafer, University of Illinois Trevor Schwartz, Texas A&M University Kirsten Soriano, California STate University-Fresno Noa Taipin, California State University-Chico Taylor Wulf, Iowa State University
2020	1			University of Florida
2020	2			South Dakota State University
2021	1	Pitmaster Team #11	Pork Ribs	Rachel Crowley, Iowa State University Chloe Gingerich, University of Florida Katrina Klein, Colorado State University Douglas Natoce, University of Florida

2021	2	Pitmaster Team #7	Pork Ribs	Anna Carlock, Oklahoma State University Grant Franzenburg, Iowa State University Mycala Jordan, Angelo State University Conner Mckinzie, Texas Tech University Victor Rosas, Angelo State University Kiana Thomas, Angelo State University

Processed Meats

Year	Placing	Type	Division	Name	University
2013	1	Team		Bama Slammas	Combined Iron Chef/Processed Meats
2014					Combined Iron Chef/Processed Meats
2015					Combined Iron Chef/Processed Meats
2016	1	Team	Graduate		Oklahoma State University
2016	1	Individual	Graduate	Morgan Neilson	Oklahoma State University
2016	1	Team	UG		Texas Tech University
2016	1	Individual	UG	Carl Frame	Iowa State University
2017	1	Individual	UG - Novice	Megan Eckhardt	Texas Tech University
2017	2	Individual	UG - Novice	Jacob Tuell	Purdue University
2017	3	Individual	UG - Novice	Megan Jass	University of Wisconsin-Madison
2017	4	Individual	UG - Novice	Cheyanne Millican	Texas A&M University
2017	5	Individual	UG - Novice	Derico Setyabrata	Purdue University
2017	1	Individual	UG - Expert	Hannah Nelson	Oklahoma State University
2017	2	Individual	UG - Expert	Michael Stender	Iowa State University
2017	3	Individual	UG - Expert	Michaela Fevold	Iowa State University
2017	4	Individual	UG - Expert	Ben Mills	Texas Tech University
2017	5	Individual	UG - Expert	Chandler Steele	Oklahoma State University
2017	1	Individual	Graduate - Novice	Jordan Juckel	University of Minnesota
2017	2	Individual	Graduate - Novice	Danika Miller	Iowa State University
2017	3	Individual	Graduate - Novice	Jillian Milopoulos	Texas Tech University
2017	4	Individual	Graduate - Novice	Cesar Sepulveda	Texas Tech University
2017	5	Individual	Graduate - Novice	Kara Nyquist	Texas Tech University
2017	1	Individual	Graduate - Expert	Christina Fehrman	South Dakota State University

Year	Placing	Type	Division	Name	University
2017	2	Individual	Graduate - Expert	Trent Schwartz	Angelo State University
2017	3	Individual	Graduate - Expert	McKensie Harris	Texas A&M University
2017	4	Individual	Graduate - Expert	William Meyer	Angelo State University
2017	5	Individual	Graduate - Expert	Mallorie Phelps	Texas Tech University
2018	1	Individual	UG	Beth Zuber	Iowa State University
2018	2	Individual	UG	Taylor Wulf	Iowa State University
2018	3	Individual	UG	Jenna Frink	Colorado State University
2018	4	Individual	UG	Thachary Mayer	Texas Tech University
2018	5	Individual	UG	Jacob Tuell	Purdue University
2018	1	Team	UG	Taylor Wulf Beth Zuber Austin Egolf Zack Peppmeier	Iowa State University
2018	2	Team	UG	Jenna Frink Conrad Schelkopf Savannah Millburn Sam Barker	Colorado State University
2018	1	Individual	Graduate	Melissa Davis	Purdue University
2018	2	Individual	Graduate	Hannah Kesterson	Colorado State University
2018	3	Individual	Graduate	Sean Morrow	Texas Tech University
2018	4	Individual	Graduate	Joanna Swenson	Colorado State University
2018	5	Individual	Graduate	Clay Bendele	Texas Tech University
2018	1	Team	Graduate	Hannah Kesterson Joanna Swenson Blake Foraker	Colorado State University
2018	2	Team	Graduate	Sean Morrow Clay Bendele Cesar Sepulveda	Texas Tech University
2019	1	Individual	UG	Megan Eckhardt	Texas Tech University
2019	2	Individual	UG	Jordan Bachler	Texas Tech University
2019	3	Individual	UG	Conner McKinzie	Texas Tech University
2019	4	Individual	UG	Lexie Chen	University of Illinois
2019	5	Individual	UG	April Molitor	Texas Tech University

Year	Placing	Type	Division	Name	University
2019	1	Team	UG	Megan Eckhardt Jordan Bachler Conner McKinzie April Molitor	Texas Tech University
2019	1	Individual	Graduate	Carl Frame	Iowa State University
2019	2	Individual	Graduate	Tyler Thompson	Colorado State University
2019	3	Individual	Graduate	Macy Perry	Oklahoma State University
2019	4	Individual	Graduate	Beth Zuber	Iowa State University
2019	5	Individual	Graduate	Logan Johnson	Iowa State University
2020	1	Individual	UG	Jacie Henefey	Texas Tech University
2020	2	Individual	UG	Makenna Greenwald	University of Wyoming
2020	3	Individual	UG	Abby Vogl	University of Wyoming
2020	4	Individual	UG	Taylor Schertz	Texas Tech University
2020	5	Individual	UG	Tanner Thompson	Texas Tech University
2020	6	Individual	UG	Paige Williams	Texas Tech University
2020	7	Individual	UG	Shae Suttle	Texas Tech University
2020	8	Individual	UG	Devin Gonzales	Texas Tech University
2020	9	Individual	UG	Sam Wolf	University of Wyoming
2020	10	Individual	UG	Grace Carver	Texas Tech University
2020	1	Team	UG	Jacie Henefey Taylor Schertz Tanner Thompson Paige Williams	Texas Tech University
2020	1	Individual	Graduate	Jacob Manternach	Iowa State University
2020	2	Individual	Graduate	Beth Zuber	Iowa State University
2020	3	Individual	Graduate	Kyle Mahagan	Texas Tech University
2020	4	Individual	Graduate	Kathryn Hearn	Oklahoma State University
2020	5	Individual	Graduate	Matthew Schulte	Iowa State University
2020	6	Individual	Graduate	Logan Johnson	Iowa State University
2020	7	Individual	Graduate	Taylor Horton	Texas Tech University
2020	8	Individual	Graduate	Smantha Barker	Texas Tech University
2020	9	Individual	Graduate	Nicole Kibler	Iowa State University
2020	10	Individual	Graduate	Hector Garnica	Texas Tech University

Year	Placing	Type	Division	Name	University
2020	1	Team	Graduate	Jacob Manternach Beth Zuber Matthew Schulte Logan Johnson	Iowa State University
2021	1	Individual	UG	Kaylee Greiner	Texas A&M University
2021	2	Individual	UG	Morgan Elsworth	Texas Tech University
2021	3	Individual	UG	Kayla Hospodarsky	Iowa State University
2021	4	Individual	UG	Kami Digby	Angelo State University
2021	5	Individual	UG	Zach McDonough	West Texas A&M University
2021	6	Individual	UG	Trinity Smith	Oklahoma State University
2021	7	Individual	UG	Will Boyd	West Texas A&M University
2021	8	Individual	UG	Shelby Kinsey	Texas Tech University
2021	9	Individual	UG	Brynn Mueller	Iowa State University
2021	10	Individual	UG	Madelyn Scott	Oklahoma State University
2021	1	Individual	Graduate	Anna Carlock	Oklahoma State University
2021	2	Individual	Graduate	Travis Tilton	West Texas A&M University
2021	3	Individual	Graduate	Connor McKinzie	Texas Tech University
2021	4	Individual	Graduate	Jacob Manternach	Iowa State University
2021	5	Individual	Graduate	Caroline Downey	Iowa State University
2021	6	Individual	Graduate	Megan Eckhardt	Angelo State University
2021	7	Individual	Graduate	Sierra Jepsen	University of Idaho
2021	8	Individual	Graduate	Logan Johnson	Iowa State University
2021	9	Individual	Graduate	Katherine Modrow	Texas A&M University
2021	10	Individual	Graduate	Kara Belt	West Texas A&M University

Cleaver Teaching Award

Year	Division	Name	University
2019	MS	Michael Cropp	Iowa State University
2019	PhD	Morgan Pfeiffer	Oklahoma State University
2020	MS	Morgan Denzer	Oklahoma State University
2020	PhD	Kelly Vierck	Texas Tech University
2021	MS	Kylie Philpps	University of Florida
2021	PhD	Trent Schwartz	Texas A&M University
2022	MS	Megan Eckhardt	Angelo State University
2022	PhD	Jacob Tuell	Purdue University

Scholarship Winners Mentor Fund

Year	C. Boyd Ramsey Undergraduate	C. Boyd Ramsey Graduate
2017	Paige Binger, South Dakota State University, Carl Frame, Iowa State University, Marlee Kelley, University of Florida, Cole Perkins, Texas Tech University	Brittany Bullard, Colorado State University Danika Miller, Iowa State University
2018	Michael Cropp, Iowa State University Maggie Weinroth, Colorado State University	Morgan Denzer, Iowa State University Tommy Fletcher, Texas Tech University Ben Mills, Texas Tech University Jacob Tuell, Purdue University
2019	Jacob Manternach, Iowa State University April Molitor, Texas Tech University Kylie Philipps, University of Florida Hannah Williams, Kansas State University	Esther Ijiwade, University of Alberta Elizabeth Zuber, Iowa State University
2020	Sarah Bludau, Texas A&M University Melinda Davis, University of Florida Makenna Greenwald, University of Wyoming Mandy Lawson –Oklahoma State University	Jessica Brown, University of Florida Taylor Price, Oklahoma State University
2021	Grace Jakes, Iowa State University Kayla Hospodarsky, Iowa State University Rachel Crowley, Iowa State University Gabriella Allen, University of Florida	Sierra Jepsen, University of Idaho Jordan Nehls, University of Wisconsin-Madison
2022	Chloe Calhoun, University of Nebraska-Lincoln Megan Sorenson, Angelo State University Hannah Folkerts, Iowa State University Madison Romanyk, Purdue University	Morgan Denzer, Oklahoma State University Muhammad Junaid Nawaz, University of Georgia

Year	Robert Rust Award	Kinsman International
2014		Michael Chao, University of Nebraska Megan Webb, Colorado State University
2015	Kylie Philipps, University of Florida	Emily Arkfield, University of Illinois
2016	John Chandler Sarchet, Texas Tech University	Benjamin Bohrer, University of Illinois
2017	Abbey Schiefelbein, Kansas State University	Amanda Outhouse, Iowa State University
2018	Bergin Debruin, Iowa State University	Maggie Weinroth, Colorado State University
2019	Meagan McMurray, Texas Tech University	Elizabeth Zuber, Iowa State University
2020		Jessica Brown, University of Florida
2021		Amelia Welter, Kansas State University
2022		Not awarded

Year	Hunter International Travel	Robert Cassens PhD Scholar
2014		
2015		
2016		Loni Woolley-Lucherk, Texas Tech University
2017		Maggie Weinroth, Colorado State University
2018	Haley Davis, Colorado State University	Devin Gredell, Colorado State University
2019	Jade Cooper, University of Missouri	Keely Hanlon, Texas Tech University
2020	Derico Setyabrata, Purdue University	Matt Schulte, Iowa State University
2021	Amelia Welter, Kansas State University	Logan Johnson, Iowa State University
2022	Xinyi Wei, University of Guelph	Morgan Denzer, Oklahoma State University

Year	Dr. Bobby VanStavern Award for Beef Quality Research	Phi Tau Sigma - AMSA Research with Impact Scholarship
2021	Blake Forarker, Texas Tech University	Derico Setyabrata, Purdue University
2022	Tanner Thompson, Texas Tech University	Jacob Tuell, Purdue University

Appendix I

U.S. Patents

Author(s)	Title	U.S. Patent Number	Issued
Anderson, D. B., K. K. Schmiegel and E. L. Veenhuizen	Growth promotion	4,690,951	9/1/1987
Anderson, D. B., K. K. Schmiegel and E. L. Veenhuizen	Growth promotion	4,734,437	3/29/1988
Anderson, D. B. and J. F. Wagner	Growth hormone and thyroid hormone	4,818,531	4/4/1989
Anderson, D. B., K. K. Schmiegel and E. L. Veenhuizen	Growth promotion	4,849,453	7/18/1989
Anderson, D. B., and E. L. Veenhuizen	Phenethanolamine increase fat content of sows' milk	4,904,662	2/27/1990
Anderson, D. B., K. K. Schmiegel, E. L. Veenhuizen and R. R. Tuttle	Growth promotion	4,992,473	2/12/1991
Anderson, D. B., E. L. Veenhuizen	Fish Production	5,216,029	6/1/1993
Anderson, D. B., D. J. Jones, and A. L. Melliere	Ractopamine and growth hormone combination and method using it to improve growth rate, feed efficiency and carcass quality of pigs	5,453,418	9/26/1995
Anderson, D. B. and E. L. Veenhuizen	Phenethanolamines, N-3-phenylpropyl, animal growth promotors	5,631,298	5/20/1997
Anderson, D. B., K. K. Schmiegel, E. L. Veenhuizen and R. R. Tuttle	Growth promotion	5,643,967	7/1/1997
Anderson, D. B., D. J. Jones, and A. L. Melliere	Ractopamine and growth hormone combinations	5,686,413	11/11/1997

Author(s)	Title	U.S. Patent Number	Issued
Anderson, D. B., K. K. Schmiegel and E. L. Veenhuizen.	Phenethanolamines, N-3-phenylpropyl, animal growth promotors	5,691,385	11/25/1997
Stouffer, J.R., D.R. Buege and W.A. Gillis	Meat tenderizing method. 21 claims, 13 drawing figures.	3,579,716	5/25/1971
Stouffer, J.R.	Improved sonic inspection apparatus. 9 claims, 9 drawing figures.	3,496,764	2/24/1970
Stouffer, J.R.	Sonic inspection method and apparatus. 15 claims, 7 drawing figures.	3,603,303	9/7/1971
Stouffer J.R. and R.G. Westervelt	Transducer positioning apparatus. 7 claims, 5 drawing figures.	4,099,420	7/11/1978
Stouffer, J.R.	Method and apparatus for ultrasonic meat grading. 22 claims, 4 drawing sheets.	4,785,817	11/7/1988
Stouffer, J.R., D.C. Miller, and Y. Liu	Detection of abnormal bone structures in animals and carcasses with ultrasound	5,140,988	8/25/1992
Stouffer, J.R.	Grading of poultry carcasses with ultrasound	5,303,708	4/19/1994
Stouffer, J.R.	Method and apparatus for positioning an ultrasonic transducer for longitudinal scanning of an animal or carcass. 10 claims, 4 drawing sheets.	5,316,003	5/31/1994
Liu, Y. and J.R. Stouffer	Methods and apparatus for analyzing an ultrasonic image of an animal or carcass. 17 claims, 7 drawing sheets.	5,339,815	8/23/1994

Author(s)	Title	U.S. Patent Number	Issued
Stouffer, J.R., Y. Liu and S.K. Newman	Method and apparatus for positioning an ultrasonic transducer and a display screen. 16 claims, 4 drawing sheets.	5,617,864	4/8/1997
Liu, Y., and J.R. Stouffer	Method and apparatus for analyzing an ultrasonic image of a carcass	6,099,473	8/8/2000
Roberds, J., Hand, L., Taylor, D., Kafer, P., and Glowski, D.	Process and apparatus for rapid preparation of dry sausage	9,526,258	12/26/2016
Roberds, J., Hand, L., Taylor, D., Kafer, P., and Glowski, D.	Process and apparatus for rapid preparation of dry sausage	9,713,335	7/25/2017
Roberds, J., Hand, L. and Dairo, C.	Reconstructed bacon product	10,918,123	2/16/2021
Roberds, J., Hand, L. and Dairo, C.	Reconstructed bacon product	10,918,123	2/16/2021
Gretchen (Hilton) Mafi, Dell Allen, Mark Miller, Glen Dolezal, Darren Grose	Method for Processing an Animal Carcass and Apparatus for Providing Electrical Stimulation	6,364,759 B2	4/2/2002
Stephen G. Campano	Animal feed preservative, supplement, and methods.	9,675,067	2/5/2019
Stephen G. Campano	Animal feed preservative, supplement, and methods	9,675,067	6/13/2017

Appendix J

AMSA Sustaining Partners

DIAMOND PARTNER

Cargill

PLATINUM PARTNERS

JBS

Pilgrim's

Smithfield

Good food. Responsibly.

midan

Tyson

GOLD PARTNERS

FSNS Food Safety Net Services

American Foods Group

Merck Animal Health

empirical

Hawkins

Seaboard Foods

Texas Tech

Kemin

Hormel Foods

pork checkoff

zoetis

SILVER PARTNERS

ADM

Arm & Hammer

Conagra Brands

Corbion

Jack Links

Kerry

Johnsonville

U.S. Meat Export Federation

JBT

USDA

Simmons

Kraft Heinz

Elanco

Cryovac

Nestlé Purina

PIC

STF seaboard triumph foods

Tillamook Country Smoker

Iowa State University

BRONZE PARTNERS

Boar's Head Brand

Clemens Food Group

Maple Leaf

Darling Ingredients

IEH Laboratories & Consulting Group

OSU

UltraSource

Perdue Foods

Upside Foods

US Foods

Standard Meat

iCEV

weber

Essentia

Topigs Norsvin

Colorado State University

Wholestone Farms

Winpak

Appendix K

AMSA Supplier Coalition Members



Appendix L

University Meat Science Programs 1997-2022

Angelo State University
Arkansas State University
Auburn University
Benha University
California Polytechnic State University San Luis Obispo
California State University-Chico
California State University-Fresno
Cisco College
Clemson University
College of Sequoias
Colorado State University
Cornell University
Czech University of Life Sciences
Dominican University
Eastern Oklahoma State College
Eastern West Virginia
Facultad de Medicina Veterinaria Y Zootecnia, Universidad Nacional Autonoma de Mexico
Garden City Community College
Ghent University
Huntington University
Icar Indian Veterinary Research Institute
Iowa State University
Joliet Junior College
Kansas State University
King Mongkut's Institute of Technology Ladkrabang
Kitasato University
KU Leuven Technology Campus Ghent
Louisiana State University
McNeese State University
Michigan State University
Mississippi State University
Montana State University
Murray State University
New Mexico State University
Niigata University
North Carolina State University
North Dakota State University
Northwest Missouri State University
Obihiro University of Agriculture & Veterinary Medicine
Oklahoma State University
Oregon State University
Penn State University
Poznan University of Life Sciences
Prairie View A&M University
Public University of Navarra
Purdue University
Seoul National University
Sichuan University
South Carolina State University
South Dakota State University
Sul Ross State University
Sydney University
Tarleton State University
Texas A&M University
Texas A&M University - Kingsville
Texas A&M University-Commerce
Texas Tech University
The Ohio State University
The Pennsylvania State University
The University of Melbourne
Then University of Queensland
Tufts University
Tuskegee University
Universidad Federal de Vicosa
University of Adelaide
University of Agriculture in Krakow
University of Alabama - Birmingham
University of Alberta
University of Arizona
University of Arkansas
University of Arkansas
University of California - Davis
University of Connecticut
University of Findlay
University of Florida
University of Georgia
University of Guelph
University of Helsinki

University of Idaho
University of Illinois
University of Kentucky
University of Manitoba, Food and Human Nutritional Sciences
University of Melbourne
University of Minnesota
University of Missouri
University of Nebraska - Lincoln
University of Nevada, Reno
University of New England
University of Pretoria
University of Puerto Rico, Mayaguez
University of Sao Paulo
University of Saskatchewan
University of Sydney
University of Tennessee
University of Texas MD Anderson Cancer Center UT Health
University of the Free State
University of Wisconsin - Madison
University of Wisconsin-Platteville
University of Wyoming
Utah State University
Virginia Polytechnic Institute & State University
West Texas A&M University
Western Kentucky University
Western Texas College
Zamorano

Appendix M

History According to Bray

Robert W. Bray, Professor Emeritus, University of Wisconsin

Originally published in *The 50th Anniversary History of the Reciprocal Meat Conference,* (1997).

Prologue to Meat Science

Meat, the flesh from animals, has contributed to the welfare of man for centuries, the muscle and associated fatty tissues supplying him with a major portion of his protein and energy needs.

Today, meat on the table is an accepted fact in the affluent lives of most Americans; yet younger generations know very little of the extraordinary achievements that have brought them both a quantity and a quality of meat available no place else in the world. The amount and quality of meat consumed are tied closely to strong agricultural economies and to the amount of disposable incomes.

Today's meat supply is in sharp contrast to that of the days when man had to rely on the hunting of wild animals native to the area. In America, the large buffalo, elk and deer herds provided the Indians and early settlers with their meat supply. With the demise of these herds, the introduction of cattle, pigs, and sheep from Europe and the British Isles led to the development of domesticated herds and flocks and a more dependable food supply. Families spent most of their time producing food, shelter and clothing for their own use. Ninety percent of the U.S. population was on farms in l800 (compared to about 2.0% now).

Animal husbandry was developed through experience at first, but in the latter half of the 19th century, leaders of government recognized the need to further develop its agriculture, for only an efficient agriculture could free labor to develop a great nation. Thus, the significance of U.S. agriculture today, and meat-animal production as a large part of it, can be attributed to such enabling acts as the Homestead Act of 1862 (which encouraged and enhanced the development of family farms), the Morrill Act of 1862 (which established the State Agricultural Experiment Stations), and the Smith-Lever Act of 1914 (which established the Cooperative Agricultural Extension Service). All of these developments did indeed lead to a more efficient animal-production industry which provided adequate supplies of meat for U.S. citizens, as well as an excess for export in the beginning of the 20th century.

The meat-packing industry developed at central marketing points such as Philadelphia, and then westward to Cincinnati, Chicago, Kansas City and Omaha. The Chicago stockyards, established in 1865, soon became the nation's leading livestock market. The development of the railway system and very importantly, the refrigerated railroad

car, was a major factor in developing huge meat-packing industries in both Chicago and Kansas City. Marketing and the sale of carcasses by processors to retailers led to the recognition of value differences among animals sold for slaughter and ultimate consumption. Consumer protection from meat unfit for consumption first came about in the passage of the Meat Inspection Act of 1906.

Subsequently, livestock shows, patterned after those of Europe, were sponsored by central markets and meat packers, such as the Centennial Exposition in Philadelphia and Fat Stock Shows in Chicago and Kansas City. These shows were the forerunners of the International Livestock Exposition in Chicago and the American Royal in Kansas City in about 1900, as well as in other cities with public stockyards.

Differences in the rates of animal growth and reproduction led to very significant discoveries by British and U.S. scientists in animal husbandry during the latter part of the 19th century. Credit must be given to British researchers J.B. Lawes and J.H. Gilbert who were perhaps the first to report (in 1860) on the influence of “fattening” on the composition of oxen, sheep and pigs. W.A. Henry of Wisconsin and Sanborn of the Missouri Experiment Station in the 1800’s sought to answer the question “Will the character of food influence the character of bone and muscle of a pig?” Subsequently, in the early part of the 20th century, it was confirmed by animal nutritionists that meat animals, especially hogs, were in a real sense what they ate. No one feed material provided the necessary materials required for growth and reproduction. The proper amount and quality of protein in meat animal rations, the contribution of energy from carbohydrates and starches in grain, and the discovery and need of vitamins and minerals led to very significant increases in the supply of meat during this period. Animal health research was also an important factor in the increased supply.

The Birth and Early Development of Meat Science

The land grant colleges established as the result of the Morrill Act led to the early creation of Departments of Animal Husbandry, but there is very little evidence of the teaching of meat courses or research before the beginning of the 20th century. Reference is made to the excellent history of the development of “meats” programs at land grant colleges in the Twenty-Fifth Anniversary History of the Reciprocal Meat Conference, presented at the Reciprocal Meat Conference of the American Meat Science Association in 1972. This record shows that the first college “meats” course was offered at the University of Minnesota in 1893 by Andrew Boss, and was entitled “Instruction in Killing, Dressing, Cutting and Curing Meat.” The first meat laboratory was built on the Minnesota campus about 1900. The University of Illinois offered a meats course in 1902, Michigan in 1907, Pennsylvania in 1912, Ohio in 1913, Cornell in 1915, Kentucky, Iowa and Colorado in 1918 and North Dakota in 1919. These programs led to what may be called the “significant twenties,” in which 10 other states began to give instruction in meats.

In reading the excellent documented history (referenced above) of the gradual but solid progress of meat science in the United States, one can't help but conclude that meat science, early in its development, was blessed with strong leaders with great vision. First among them must have been Thomas Wilson, "the packer, agriculturist, and an apostle of cooperation who believed that all segments of the meat industry; packer, producer, retailer, and researchers were actually partners in a large and complicated undertaking." His leadership led to the establishment of the National Live Stock and Meat Board in 1922. The second leader, perhaps second only because he was appointed by Thomas Wilson and the Board of Directors of the National Live Stock and Meat Board, was R.C. Pollock, the first general manager of the Meat Board.

Perhaps the propaganda at the time–labeling meat as being injurious to health, through supposed development of gout and rheumatism, and thus a major reason for creating the Meat Board was a blessing in disguise. It soon led to the development of an organization that provided educational materials about meat and funds for research leading to the identity of nutrients in meat that are important in the human diet. R.C. Pollock, shortly after becoming general manager, called a conference of USDA and experiment station representatives, assembling the first generation of college meats men who undoubtedly were struggling to gain recognition among their animal production colleagues. Thus began a melding process that in later years has continued to bring meat scientists together. The occasion also provided for interaction at the time with the relatively few USDA meat scientists. The outcome of this meeting was a project entitled "A Study of the Factors Which Influence the Quality and Palatability of Meat;" the title of which was later changed to "Cooperative Meat Investigations." A special report to the Society of Animal Production in 1924 led the society to establish a committee designated as "The Committee on Cooperative Research" and an invitation to the state experiment stations to join in this cooperative effort. This became the nucleus for bringing the need for meat education and especially research to the attention of college administrators and Congress. This in part helped in the passage of significant legislation, the Purnell Act (1925), which provided funds for conducting investigations, "bearing directly on the production, manufacture, preparation, use, distribution and marketing of agricultural products."

Subsequently, a meeting of USDA and 27 experiment station representatives, sponsored by the National Live Stock and Meat Board, led to joint research efforts. The need for meat grading was emphasized in these discussions and resulted in a USDA bulletin entitled "Market Classes and Grades of Dressed Beef" which led Congress to passing an act setting up the federal Meat Grading Service in 1925. Perhaps the most significant outcome of the meeting was the exchange of information about what research had been or was being done at other institutions. These exchanges and the reciprocation among the cooperators led to Review Committee reports and the publication of five volumes of Cooperative Meat Investigations between 1937 and 1946.

Again, R.C. Pollock, the idea man, felt that Intercollegiate Meat Judging Contests would be highly educational for college students, and would bring greater focus upon the opportunities for them in the meat industry. He bounced the idea off Thomas Wilson and some of the first-generation meats men, and, as expected, received their support. Thomas E. Wilson and Company provided the support to initiate the first contest in 1927 at the International Livestock Exposition in Chicago. Interest spread and successful collegiate contests led to the establishment of FFA, Home Economics and 4-H meat judging contests.

During the 1930's, there was substantial increase in the number of colleges offering instruction, engaging in meat research and taking part in the Cooperative Meat Conferences. The Meat Board and the conference established a Meat Cooking Committee, thus bringing interaction between home economics and meats men. This was also the period when the Warner-Bratzler meat shear was developed. Significantly, it is still used as one of the more reliable means for measuring meat tenderness.

The Rapid Expansion Years

Although the significant 20's represented a decade of recognition for meat education and research, one must recognize that "meats men" became meat scientists during the rapid expansion and development of the field during the 1950's and early 1960's. Typically, animal husbandry departments in the late 1940's had no more (and usually less) than one full-time equivalent in meat instruction and research. A few departments had some part-time effort in meat extension. This situation rather suddenly changed with additional funding for research from 1950 to about 1965. Likewise, the large influx of college students and the recognition of opportunities for careers in the meat industry led to expanded state budgetary support for hiring additional staff. Research support through USDA (Hatch funds), the National Institutes of Health (NIH), USDA Competitive Grant Program, other federal agencies and industry grants led to substantial growth in the number of graduate students and thus to the growth of research programs.

An increased interest in beef carcass grading after World War II and the introduction of USDA pork carcass grades in the early 1950's led to a rapid expansion of carcass shows (later called Quality Meat Contests) at national, state and county livestock shows. These contests expanded the role of meat scientists to that of extension education for producers. Also, during the period, meat extension activities began to include the needs of small meat processors and consumers. At about the same time, meat scientists became heavily involved in the search for more objective methods for measuring the lean-to-fat ratios in live animals and carcasses, such as back fat probes, ultrasonics, K-40 counters and specific gravity determinations. Likewise, objective measurements for meat quality characteristics, muscle water holding capacity, color, quantities of marbling and additional methods for measuring meat tenderness were developed. The objective measurements of muscle and their correlation to carcass composition led to prediction equations for carcasses and subsequently to the development of yield grades.

In the 1950's, meat packers sold beef in carcass form (fore and hind quarters) and some in the form of wholesale cuts. This began to change in the 1960's and 70's when innovative packers began to further process wholesale cuts into boneless cuts, which today has resulted in boxed beef. Further processing of beef and pork started a trend toward merchandising a greater portion of meat in the form of processed meats. Accommodating this trend was the development of automated and continuous processing of sausage products. Thus, it was not unexpected that meat scientists both in academia and in industry began to research problems facing meat processors, such as color and moisture retention, eating quality and shelf life. Noticeably, meat industry research facilities and personnel grew rather rapidly during this period. Industry saw the need for this research and established the American Meat Research Institute to serve American Meat Institute members. Early on its research efforts related to food safety issues.

The growth of programs in meat research during this period highly complemented the instruction and extension programs and clearly signaled that the "meats" field was reaching maturity. Whereas in the 1940's there were less than six "meat" scientists with Ph.D.'s, the 1950's and 60's saw a many-fold increase in meat scientists with training in many of the basic sciences, such as biochemistry, microbiology, histology and physiology. Many meat scientists in colleges became members of Food Science Departments, thus changing in many cases the focus of their research.

The Development of Muscle Biology

Carcass composition, meat-quality studies, and meat processing (primarily meat curing) dominated the research emphasis in the 1940's and the 1950's. After the development of USDA yield grades for swine, beef and sheep carcasses, consumers became concerned about fat-to-muscle ratios in retail cuts. This concern became greater with each succeeding year. In the late 1950's and early 1960's, a pronounced change started to take place in meat research. This was a period in which graduate students working towards Ph.D.'s were receiving more training in the basic sciences, such as biochemistry, microbiology, and histology, and in fields related to meat science such as food science, food safety and marketing. Along with this training and the influx of new techniques and scientific equipment, research became more basic. Applied problems were identified that could not be solved without knowing more about the "why" of scientific events. It was the beginning of an era that third- and now fourth-generation meat scientists refer to as "muscle biology." Since the early 1970's, many new topics have been featured at the Reciprocal Meat Conferences: for instance, animal growth as it relates to live-weight gain and body composition, exotic beef breeds and their genetic potential and physiological maturity variations in meat animals. As evidence of further basic research emphasis, the conference established a biochemistry and biophysics committee that developed such topics as the structure of membranes, the properties of the sarcolemma, the possible role of sarcoplasmic reticulum in postmortem muscle and muscle glycolysis. This was to be followed in the early 1980's by the influence of

hormones and hormone-like agents upon growth, and subsequently quantitative and quality differences in carcasses. This was followed in the 1990's with recombinant DNA techniques, muscle cell cultures and mechanisms of muscle proteases.

The microbiology of meats received relatively little attention in the early days of meat science. Microbiological research expanded in the 1970's and 80's with greater public concern about food safety and the increase in meat scientists with microbiological training. Microbiological standards received considerable attention. Special emphasis during this period was given to food poisoning topics such as *salmonellosis, clostridium perfrigens, botulism, and staphylococcus.* Recently, listeriosis and campylobacter food poisoning have become important areas of emphasis. In the 1990's, E. coli 0157:H7 provided the impetus for the initiation of HACCP (Hazard Analysis and Critical Point Control system). Since the advent of self-service, packaging materials and techniques have resulted in studies related to microbiological growth, the retention of color and other quality characteristics.

The concern over food additives, and especially those used in the production of meat animals and the processing and preservation of meat, led to such research as sulfa residues in pork, the nitrite content of cured products and the preservation of meat through the use of irradiation.

Food engineering became a new dimension of food science, and the modification of meat products became important as the meat industry saw the need to fabricate less-demanded muscles in the carcass into restructured products that were more uniform in appearance and eating qualities. Considerable basic research pertaining to protein binding and the addition of binding agents aided these engineering efforts.

Nutritional concerns about the role of meat in the diet, leading to the establishment of the National Live Stock and Meat Board in 1922 and the research that followed, proved meat to be an excellent source of protein, the B vitamins and minerals, especially iron and zinc. All seemed serene until heart disease concerns surfaced in the 1970's and 80's. Many researchers and the medical profession claimed that meat, with its saturated fatty acids and cholesterol content, was detrimental to health. Topics such as "Diet and Heart Disease," "Diet and Heart Risk" and "Diet and Hypertension" became part of the Reciprocal Meat Conference programs. This has led to joint research efforts by meat scientists and other scientists, nutritionists and biochemists to seek the truth.

Reciprocal Meat Conference

The war years stopped progress in the development of meat investigations and education. But when World War II ended, R.C. Pollock felt strongly about the need for meats men to have annual conferences and gained support for developing a conference to replace the no-longer functioning Cooperative Meat Investigations. At this point in time, a number of second-generation meats men–who had received training under such mentors as Beard, Boss, Brown, Bull, Francioni, Helser, Loeffel, Mackintosh, Oliver, Tomhave, Trowbridge, and Wilford–came onto the scene, so the corps of meats men

began to grow rapidly. Pollock set up a committee which led to the first Reciprocal Meat Conference in 1948, held in Chicago with 46 in attendance including personnel from 29 land grant colleges, the USDA, and the Meat Board. This provided and still continues to be an opportunity for meat scientists as teachers, researchers and extension specialists to become better acquainted, and to exchange ideas and experiences regarding methods of teaching, research techniques and extension methods. R.C. Pollock hand-picked W.H. Tomhave, one of the first teachers of “meats” courses at Pennsylvania State University, to become the General Chairman of the conference: a man with good organizational skills and diplomacy. The Reciprocal Meat Conference Programs during the 1950’s were typically developed by Beef, Pork, Lamb and Veal Evaluation Committees. Meat quality topics were developed by a Research Methods Committee that pertained to experimental design, meat tenderness and other palatability factors.

Increased participation in the Intercollegiate Meat Judging contests after World War II led to the establishment of a Meat Judging and Manual Committee and topics on the program of RMC. Also, during this period “meats” men provided leadership in establishing live animal evaluation clinics. These clinics and meat judging contests led to the development of Meat Animal Evaluation Contests by R.G. Kauffman in 1969. Also, the Recommended Guidelines for Carcass Evaluation were published by AMSA.

The Reciprocal Meat Conference was highly guarded by meats men from colleges and the USDA and was essentially a closed organization until 1953. Members at that time wisely expanded its membership to the staff of the American Meat Institute Foundation, the Animal Branch of the quartermaster Food and Container Institute, and subsequently to meat industry researchers. Perhaps of equal significance to the establishment of the conference was the publication of the proceedings of the conference–again an idea strongly supported by R.C. Pollock. It is of note that the Meat Board provided all of the costs of the conference until 1955, when it was decided to charge a registration fee to defray part of the expenses.

Many facets of meat research, particularly the specialized basic research efforts during the 1970’s and early 1980’s, began to splinter scientists attending Reciprocal Meat Conferences. The word “reciprocal” began to lose its meaning, as evidenced by a lack of attendance and participation in the programs falling outside the interests of scientists attending the meeting. Two significant developments in the structuring of the Reciprocal Meat Conference program were initiated. The first gave greater emphasis to reciprocation between speakers and those in attendance through the establishment of reciprocation sessions by A.W. Kotula and T.P. Ringkob on timely topics. The second resulted from the recommendations of a committee appointed to look at the problem of polarization within AMSA. The committee recommended that the structuring of the RMC program be developed around a theme-type concept “in which both basic and applied aspects of a broad topic would be presented within a single session” of RMC, thus bringing the fundamental and practical aspects together. In addition, entrants in the

graduate student research poster competition should display their knowledge of both the basic and the applied aspects of their research.

The Reciprocal Meat Conference was truly the structure that brought meat scientists together, led to the development of the American Meat Science Association and helped establish relationships among scientists worldwide.

Meat Industry Research Conference

The American Meat Institute in 1924 established a research laboratory at the University of Chicago through a stimulus of grants made by Thomas E. Wilson. In 1944 the AMI voted to establish an independent organization to carry out research and education in livestock production, processing and utilization, thus the American Meat Institute Foundation began operations in 1947.

A very important development leading to the better education of meats men was the offer by the American Meat Institute Foundation to sponsor a “Conference on Research” which continued annually under this name until 1959 when it was titled the American Meat Institute Conference. In 1964, the American Meat Institute Foundation invited the American Meat Science Association to jointly sponsor the conference. The name was then changed to “Meat Industry Research Conference.” This conference is highly regarded by university and industry meat scientists–both for the special short courses offered and the discussion of timely topics of importance to the meat industry.

American Meat Science Association

Dr. Ernest Briskey championed the recognition of the field of Meat Science through efforts at the annual Reciprocal Meat Conference in 1964 at the University of Wisconsin in the establishment of the American Meat Science Association.

Meat scientists at the time seemed ready for this recognition and today the association is recognized as a major science association among the other associations in the animal and food sciences. Donald Kinsman, at the 1996 Reciprocal Meat Conference, in his AMSA International Award Lecture provided an excellent history of the association. The growth of the association has increased steadily from 30 to 400 in the 1960’s to nearly l000 today, with about 15% of its membership from other countries.

First-generation meat scientists began to be recognized for their contributions in 1956, when the Reciprocal Meat Conference started recognizing individuals’ contributions to meat science through Signal Service Awards. The founding of AMSA and its rapid growth in membership led to the initiation of several other awards as meat scientists began to specialize. In 1965, awards were established for teaching, research and extension-industry service and were expanded in following years, Pollock Award-1977; Meat Processing Award-1978; International Award-1989; AMSA Achievement Award for Young Members-1992; Intercollegiate Meat Judging Meritorious Service-1993.

The National Live Stock and Meat Board, the truly great benefactor of the RMC and the American Meat Science Association is now merged with the National Cattlemen's Beef Association. This has led the Association to conclude that it has matured to a point where it can now become an independent organization. In this form, it can provide objective information through research and education for all segments of the livestock and meat industry as well as consumers.

International Participation

The rapid growth of Meat Science in the U.S. paralleled a world that seemed to become smaller through commercial air travel, and meat scientists around the world began to meet with their counterparts in other lands. This was a very significant development, which led foreign students to U.S. meat science laboratories to pursue higher degrees or post-doctoral studies; likewise, U.S. students began traveling to other countries for post-doctoral research experience.

AMSA has hosted international meetings on two occasions. In 1980, the 26th European Meeting of Meat Research Workers (EMMRW) was held in Colorado Springs, Colorado. In 1995, the 41st International Congress of Meat Science and Technology (IcoMST) was held in San Antonio, Texas (the EMMRW was the predecessor to the ICoMST).

The EMMRW was a six-day long meeting and attracted participants from 36 countries. There were 14 technical sessions plus a major symposium entitled "Meat in Nutrition and Health." The ICoMST was hosted jointly by AMSA and the Meat Board and included the RMC. It was attended by 629 delegates and 146 non-delegates representing 50 countries. More than 325 scientific presentations were made. A highlight was the one-day symposium "Global Issues Impacting Demand for Meat."

By hosting these meetings, AMSA was established as a truly international association. Much of the success of these meetings is due to R.B. Sleeth, who served as Chairman of both organizing committees.

Education and Communications

Education and communications always received high priority from the early Reciprocal Meat Conferences and have been given special attention during the 1970's, 80's and into the 90's. Meat extension techniques and problems have been an important part of Reciprocal Meat Conference programs. Within the last five years, timely guidelines have been published on such topics as Guidelines for Sensory, Physical and Chemical Measurements of Ground Beef; Guidelines for Carcass Composition, and Guidelines for Sensory, Physical and Chemical Measurements of Ham and a similar guideline for bacon. Newsletters, first edited by L.E. Kunkle (Ohio State University), were published from 1957 under the auspices of the Reciprocal Meat Conference and later by the AMSA, have been routinely sent to the membership. Likewise, a directory of the membership developed by Charles Adams (University of Nebraska) has been kept current since 1956. Since 1953, the RMC, and now the AMSA, has had in place a

Career Opportunities and Placement Service Committee that regularly communicates with the membership through the newsletter. As the AMSA matured, it joined the American Society of Animal Science, American Dairy Science Association, and the Poultry Science Association in forming an Intersociety Presidents Council to better coordinate activities of importance to animal agriculture. CAST (Council for Agricultural Science and Technology) was established by agricultural scientists interested in providing position papers of pending national problems relating to agriculture. AMSA joined CAST in 1978, and the Federation of Scientific Agricultural Societies in 1981. During the 1990's, AMSA has actively begun hosting Short Courses on a variety of subjects, such as HAACP. Within the last couple of years, the use of the Internet to transmit and share information resources has rapidly developed and AMSA has an active Home Page located at http://www.meatscience.org.

Perspective

Thomas E. Wilson and R.C. Pollock, men with ideas and great leadership qualities, could not have possibly envisioned the development of meat education and research that has taken place since 1922. In The 25th Anniversary History of the Reciprocal Meat Conference, (1972), there is a section entitled "The Past is Prologue" written by committee chairman D.M. Kinsman, that warrants reading. A quotation of the first sentence places the development of meat science in the U.S. in perspective. "In the evolution of every great institution there is generally a need, or an idea, followed by a period of development, and an era of maturation before it establishes its place in history." U.S. meat science now has its place in history, thanks to the many who have made it happen.



Jimmy Wise - T-shirt Auction!

Ranjith Ramanathan, KatieRose McCullough, Renee Kinzie, Kelly Vierck, Kassie Jo Huziar, Elise Warren, Kendra Wills, Ben Underwood, Jimmy Wise, Deb VanOverbeke, Morgan Pfeiffer, Shannon White, Gretchen Mafi



The Man, The Myth, The Legend

Jimmy Wise



TAMU Awards Banquet – OkState

Emily Rice, Devin Gredell, Gretchen Mafi, Morgan Pfeiffer, Drew Cassens, Chandler Steele



2019 RMC Opening Session

Rhonda Miller, Eric Berg, Dustin Boler, Chad Carr, Jennie Hodgen, Dave McKenna, Amy Down Steward, Tommy Wheeler, Keith Underwood, Dale Woerner



When women could not be in same Meats Class as men

Davey Mackintosh Meats Class Kansas State College





Bacon Suit Taste of RMC

Wes Griffin

2019 RMC Opening Session

Brandon Fields, John Scanga, Wendy Feik Pinkerton, Keith Belk, Keith Underwood







1st RMC Processed Meats Contest

Gretchen Mafi, Taylor Neilson, KC Barnes, Abby Bechtold, JT Hearn, Chance Billups, Wes Griffin, Morgan Pfeiffer, Jake Nelson, Rachel Mitacek

CSU Awards Banquet

Renee, Emma, & Jake Nelson





ASU Awards Banquet

JT Hearn, Chandler Steele, Taylor Neilson, Chance Billups, Morgan Pfeiffer, Abby Bechtold, Chase Steele, Jake Nelson, KC Barners, Wes Griffin, Rachel Mitacek



2019 RMC Picnic Aggie Alums

Tommy Wheeler, Keith Belk, Rod Hodgson, Lori Evans, Randal Garrett, Carol Lorenzen, Steven Shackelford






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Andy
Don
Roger
Larry
Tom
Dave
Ken
K-STATE


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The Three Amigos at 2019 RMC Picnic

Andy King, Steven Shackelford, Tommy Wheeler





When women could not be in same Meats Class as men

Davey Mackintosh Meats Class Kansas State College






What will you choose?
Cargill
ichooseCargill.com
Integrity
Global
Protein
Agriculture
Innovation
City
Country
Creativity
Performance
Jesse
Nathan
Tony


Bob
SPEAKER


Your Meat Team
I grow it
I process it
I sell it
10
From Farm To Home Plate


F
E
D
4


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31
23
13

AMSA STUDENT BOARD OF DIRECTORS

2003-2004



Christine Quinlan
President

Christine Quinlan is from Denmark, Wisconsin a small town near Green Bay. She completed her B.S. from the University of Wisconsin-Madison in May 1999. She moved down to Texas and worked on a combined masters of science and dietetic internship under Dr. Rhonda Miller at Texas A&M University. She graduated in May 2001 and her thesis was titled "Determination of decontamination methods for beef trimmings." Christine is currently working on her PhD and serving as the lab technician at Michigan State University under Dr. Wesley Osburn. Her focus is on processed meats and sensory analysis. She has selected and trained panelists for a trained descriptive meats attribute panel at Michigan State. Her research project is "Development of an injectable "modified marbling" solution for whole muscle beef cuts. She plans to graduate in May 2005 and would like to work in the meat industry in a position in product development or sensory science.



Wendy Palmore
At-Large Director

Wendy is a graduate student at Texas Tech University working on a M.S. degree with emphasis in MAP systems and characterization of value-added beef cuts. She grew up in DeKalb, TX on a diversified livestock and crop operation. In 2003, Wendy obtained her B.S. in Animal Science with meat and food industry management emphasis at Texas Tech University. While pursuing her undergraduate degree, she was a member of the meat judging and the meat animal evaluation team, as well as coached the Clarendon College meat judging team. She was also fortunate to participate in a food safety/HACCP internship with Excel Corp., followed by studying at Moscow State University in Moscow, Russia for a summer. Wendy is currently coaching the Texas Tech University meat judging team. Her research has involved pre-harvest food safety interventions and NCBA Optimization Guide for Value-Added Beef Cuts. Wendy's career goal is to enter the meat industry in the area of retail product development/ packaging systems with the possibility of returning to obtain a Ph.D.



Andy King
Southern-Regional Director

Andy King is from the small Texas panhandle town of Wheeler. Andy earned a Bachelor of Science in Animal Science at Texas A&M University, where he was a member of the Meat Judging and Meat Animal Evaluation Teams. Andy then completed a Masters degree at Kansas State University, under the direction of Dr. Michael Dikeman. While at KSU, Andy coached the Meat Judging Team. Since returning to Texas A&M to work on a Ph.D. with Dr. Jeff Savell, Andy has conducted research on carcass decontamination, carcass quality, and meat tenderness. Additionally, he has taught meat science laboratory classes and assisted with the introductory HACCP class and numerous extension programs. He has also coached the Meat Animal Evaluation Team. His career goals are to work in teaching and research at the university level and pursue a research program on the antemortem and postmortem factors affecting animal growth, as well as carcass and meat quality.



Keith Underwood
Western-Regional Director

Keith Underwood is a graduate student at the University of Wyoming working on a Master's degree in Food Science. Keith is from Shallowater, a small town in the panhandle of Texas. Keith earned a B.S. in Animal Science from Texas Tech University in December of 2002. While at Texas Tech, Keith was a member of the 2000 Meat Judging Team and the 2001 Meat Animal Evaluation Team. He currently coaches the Meat Judging Team at the University of Wyoming. Keith plans to pursue a Ph. D. with the intention of teaching or working in the industry.



Stacy Scramlin
Eastern-Regional Director

Stacy Scramlin was raised on a Southdown sheep farm in Ortonville, Michigan. She earned a Bachelor of Science in Animal Science from Michigan State University in 2003. As an undergraduate, Stacy was a member of the 2000 Meat Judging Team. She then coached the 2002 Meat Judging Team. Stacy is currently working toward a Master of Science degree at the University of Kentucky. In her research, she is studying antioxidants and packaging in fresh meat products. Additionally, Stacy is coaching the University of Kentucky Meat Judging Team.



Jennifer Leheska
Past President

Jennifer is a native of Ohio where she grew up on a farrow-to-finish hog farm and served as the 1995 Ohio Pork Industry Queen. Jennifer received her B.S. degree with a major in Animal Science and minor in Ag Business and Applied Economics from The Ohio State University in 1998. She continued her education at South Dakota State University where she coached three meat judging teams and conducted research in the area of fresh meat quality. Then, in 2001, Jennifer earned her M.S. degree at SDSU. Currently, Jennifer is pursuing her Ph.D. at Texas Tech University with a major in Meat Science and a minor in Food and Nutrition. In addition, she is working on fulfilling requirements to become a Registered Dietician. Jennifer is currently beginning new research in the area of beef nutrition, and upon completion of her degrees plans to provide nutritional consultation services for the meat and livestock industry.



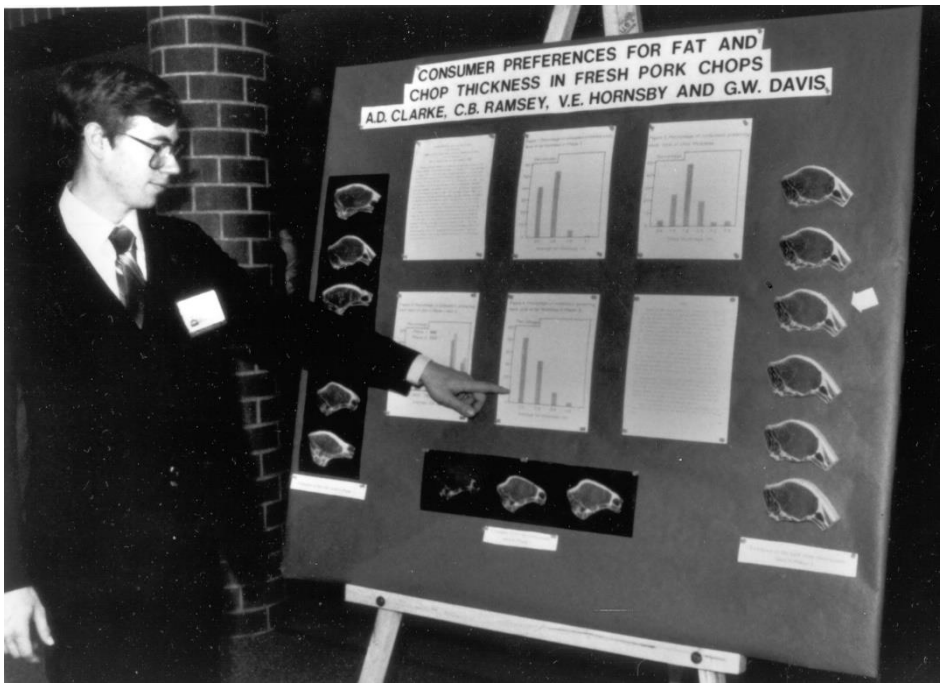
Angela Reicks
At-Large Director

Angela Reicks is currently working on her PhD in meat science at Texas Tech University emphasizing on fresh meat enhancement and shelf life. Angela is a native of Protivin, IA and attended Iowa State University were she received her B.S. in animal science in 2001. While at Iowa State, she was a member of the 2000 Meat Judging Team and the 2001 Meat Animal Evaluation Team. Angela received her M.S. from Kansas State University in 2003 under the direction of Dr. John Unruh. While at Kansas State, Angela coached the Meat Judging Team in 2002 and 2003. Her thesis was entitled: Effects of commercial phosphate and citrate ingredients on the enhancement of under utilized beef muscles. After graduation, Angela would like to work in research and development of fresh beef products with the possibility of returning to academia.



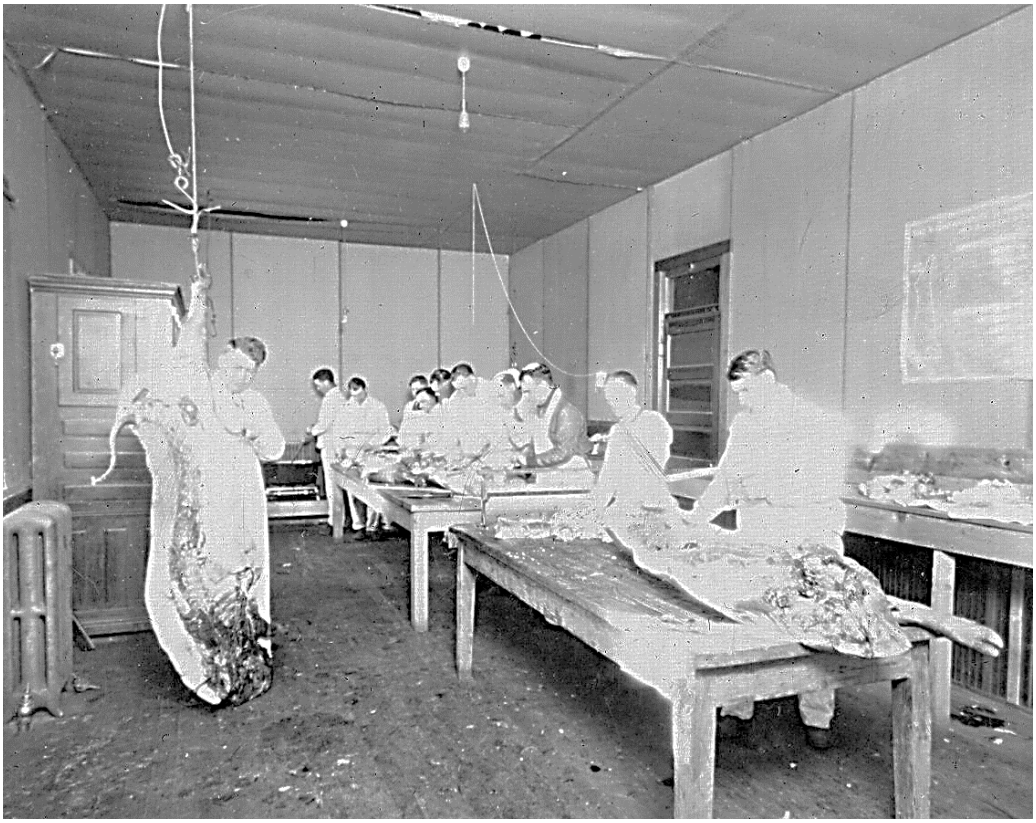
Jeff Sindelar
Midwestern-Regional Director

Jeff Sindelar grew up on a diversified livestock and crop farm near Howells located in northeast Nebraska. He received a B.S. in Animal Science with a meats emphasis from the University of Nebraska-Lincoln in 1999. During his undergraduate, he participated in 3 internships – IBP, The Solae Company, and Viscofan USA. Jeff received a M.S. in Animal Science – Meat Science at Michigan State University in 2001 under the direction of Dr. Wesley Osburn. His research focused on addressing atypical aromas and flavors in pre-rigor sow loins. Jeff is currently completing his 2nd year of Ph.D. work in Meat Science at Iowa State University under the direction of Dr. Joe Cordray. At MSU & ISU, Jeff coached 3 Intercollegiate Meat Judging teams and assisted with 2 others. At ISU he is actively involved with the short course program and the meat science extension program. Jeff has traveled across the state of Iowa, across the United States, and overseas presenting topics related to meat processing and food safety. His research interests are in the area of processed meats and more specifically, non-meat ingredient usage and value-added product technology. Jeff plans to explore both industry and academia positions when he graduates.


CONSUMER PREFERENCES FOR FAT AND
CHOP THICKNESS IN FRESH PORK CHOPS
A.D. CLARKE, C.B. RAMSEY, V.E. HORNSBY AND G.W. DAVIS


Fate of Salmonella enterica serotypes Typhimurium, Enteritidis, and Heidelberg in Beef Steaks during Sous Vide Cooking at Different Holding Time and Temperature Combinations
Abstract # 108
TAP TO GO BACK TO KIOSK MENU
Introduction
Methods
Results
Objective
Conclusion
Acknowledgements


SINCE 1889
JONES
DAIRY FARM
125th Anniversary
RMC softball





AMERICAN MEAT SCIENCE ASSOCIATION